Index to Volume 135

Author Index

Abate, M., 925
Abel, D., 611
Abrutyn, E., 1
Achilli, G., 975
Agee, C. C., 9
Agranovskaya, E. N., 697
Ahlmén, J., 473
Alexandrova, G. I., 681
Al-Ibrahim, M., 517
Allan, I. D., 673
Alling, D. W., 135, 145, 155, 167, 176, 183
Alpert, S., 392
Anderson, P., 34
Anderson, R., 113
Appel, M. J. G., 753
Arko, R. J., 879
Armstrong, D., 349
Armstrong, J., 939
Armstrong, J. A., 990
Attar, H., 925
Ayoub, E. M., 308
Badri, M. S., 308
Baer, H., 308
Baine, W. B., 649
Bairan, A., 135
Baker, C. J., 392
Ballard, C. A., 925
Bancroft, W. H., 79
Bannister, T. W. P., 952
Barrick, S., 611
Barth, R., 846
Bartlett, J. G., S18, S80, S89
Beachey, E. H., 267
Beaman, T. C., 42, 51
Becker, L. E., 962
Belding, R. C., 42
Bellanti, J. A., 386
Bemis, D. A., 753
Benenson, A. S., 135, 145, 155, 167, 176, 183
Bernard, B., 925
Beutner, K. R., 499
Bibi, S. S., 949
Bjark, P., 669
Blake, R. K., 454
Bobitt, J. R., S30
Bodendorfer, T., S111
Bodey, G. P., 61
Booss, J., 478
Bøvre, K., 669
Boyce, J. M., 103
Bran, J. L., S49
Bratlid, D., 669
Bregman, D., 687
Brøndbo, A., 669
Brown, J. III, 593
Brown, S. T., 939
Brunner, H., 524
Brunton, L. L., 720
Bryan, J. A., 687
Bryant, S. M., 763
Buchanan, T., 879
Budkowska, A., 463
Buhles, W. C., Jr., 911
Buimovici-Klein, E., 380
Burke, D. S., 55
Butler, T., 1017
Cameron, A. M., 9
Campbell, C. H., 678
Campbell, J. M., 911
Cantey, J. R., 454
Carballal, G., 367
Carp, R. I., 281
Cassidy, E., 398
Chambers, R. W., 975
Chan, T. C., 664
Chanock, R. M., 20, 524, 582
Chatterjee, B. D., 654
Chedid, L., 771
Chen, T. H., 289
Cherry, J. D., 135, 145, 155, 167, 176, 183
Cherubin, C. E., 807
Cheung, K.-S., 837, 841
Cho, C. T., 468
Chow, A. W., S35, S65
Chow, P., 736
Chow, T., 499
Clarke, A., 423
Coker-Vann, M., 447
Condon, R., S86
Connor, J. D., 135, 145, 155, 167, 176, 183
Cook, S., 432
Cooper, L. Z., 380
Cooperative Antibiotic Diarrhea Study Group, S104
Corey, L., 398
Crabbs, C. L., 600
Craig, W. A., 217
Creech, W. B., 1014
Crockett, V. A., 392
Crovari, P., 252
Cruz, A. C., 308
Cypess, R. H., 633
Daniel, T. M., 778
Danish, M., 828
Dans, P. E., 330
De, P. K., 654
DeCastro, F., 135
DeChatelet, L. R., 949
De Flora, S., 252
DeMello, S., 499
DeMuth, R. W., 778
Devine, B. J., S111
Devlin, H. B., 438
Dixon, R. E., 729
Dolin, R., 20, 447, 714
Donta, S. T., 482
Dowling, J. N., 990
Dowling, P., 432
Drapier, J. C., 771
Dunne, M. E., 729
DuPont, H. L., 1013
Durbin, W. A., 438
Easterday, B. C., 678
Echeverria, P., 195
Eddins, D., 398
Edmiston, C., 51
Edwards, J. E., Jr., 294, 414
Eisler, D. M., 289
Elberg, S. S., 67, 289
Elliott, W. C., 939
Elwell, M. R., 646
Eriksson, E., 473
Eskenazy, M., 965
Evans, D. G., 1003
Evans, D. J., Jr., 1003
Evrard, J. R., 392
Eyal, F., 267
Farmer, J. J. III, 649
Fass, R. J., S74
Fauci, A. S., 714
Fekety, F. R., Jr., S111
Feld, R., 61
Feldman, R. A., 103
Feng, K. K., 468
Filice, G., 349
Fine, D. P., 985
Finegold, S. M., S25
Fischbach, J., 763
Fortunato, J., 432
Foy, H. M., 673
Frame, P. T., 952
Fraser, D. W., 120
Frenkel, L. D., 386
Frigerio, M. J., 367
Fuccillo, D. A., 386
Fürer, E., 512
Furness, G., 507
Gabridge, M. G., 9

Galasso, G. J., 135, 183
Galpin, J. E., S65
Gan, E., 664
Gangarosa, E. J., 649
Garanina, N. M., 358
Garfinkel, F., 897
Garvey, G. J., S120
Gee, C. L., S30
Gerber, M. A., 1006
Gerbracht, L. M., 828
Gerding, D. N., 957
Gerhardt, P., 42, 51
Germanier, R., 512
Gerna, G., 975
Gershon, A. A., 1010
Gitlin, D., 633
Glasgow, L. A., 540, 763, 918
Glickman, L. T., 633
Glode, M. P., 94
Glover, A., 113
Golden, G. S., 120
Goldschmidt, B., 432
Gorbach, S., S2, S18, S80, S89
Gordon, I., 980
Gordon, R. C., 51
Goroff, D. K., 392
Gotschlich, E. C., 94
Gratton, C. A., S69
Graw, R. G., Jr., 438
Greenberg, H., 524
Gregg, M. B., 398
Greisen, H. A., 753
Griffin, D. E., 800
Grizzard, M. B., 582
Guerrant, R. L., 720
Gurwith, M. J., S69, S104, 736
Gutschik, E., 832
Guze, L. B., S35, S65, 294, 414
Haferkamp, O., 224, 235
Hall, W. H., 957
Hamilton, J. R., 918
Harding, G. K. M., S69
Harrison, A. K., 201
Hattwick, M. A. W., 398
Hayashi, K., 744
Hyden, G. F., 337
Hayes, P. S., 103
Helms, C. M., 582
Hensen, S. A., 386
Hermann, G. T., 649
Hermodsson, S., 473
Heymer, B., 224, 235
Higbee, G. A., 995
Hildebrandt, P. K., 911
Hilfenhaus, J., 846
Hirschman, S. Z., 897
Ho, M., 990
Hochadel, J. F., 813
Hoeprich, P. D., 117
Hofmann, A. F., S126
Holmes, K. K., 330, 865
Holten, E., 669
Holzman, R. S., 517
Horswood, R. L., 524
Horvath, F. L., 135
Houston, W. E., 600
Hull, A., 659
Huston, A. C., 117
Huxsoll, D. L., 664, 911
Imai, A., 259
Inamatsu, T., 850
Inderbitzin, T. M., 512
Isaacson, R. E., 531
Ishida, K., 294
Ishida, N., 259
Ivanova, R., 965
Iwarson, S., 473
Jaeger, O., 846
Jaffe, H. W., 939
Jahrling, P. B., 646
James, W. D., 524
Jayavasu, C., 706
Jeansson, S., 28
Jennings, R., 423
Jepsen, O. B., 832
Johnson, J. W., 995
Johnson, R. T., 962
Jones, S. R., 577
Jusko, W. J., 828
Kaijser, B., 577
Kalica, A. R., 20
Kalter, Z. G., 1010
Kapikian, A. Z., 20
Kapila, R., S58
Karol, M. H., 633
Karwacki, J. J., 79
Kasper, D. L., 243, 787
Katz, B. J., 744
Kauffman, J. C., 438
Kawanishi, H., S111
Kaye, H. S., 201
Kazmierowski, J. A., 438
Keenan, K. P., 911
Keeney, R. E., 593
Keller, K. F., 813
Kellogg, D. S., 939
Kelsey, D. K., 540
Kem, E. R., 763
Kenny, G. E., 673
Kenyon, R. H., 985
Kern, E. R., 540
Keusch, G. T., S133
Khakoo, R. A., 824
Kim, K. S., 281
Kjellman, H., 473
Klaw, R., 641
Klimek, J. J., 999
Kochan, I., 623
Koestner, A., 944
Konno, T., 259
Kono, R., 706
Konstantinov, G., 965
Koornhof, H. J., 113
Korff, L., S111
Korneeva, V. I., 358
Krause, R. M., 318
Krawczyński, J., 298
Kremer, R. J., 600
Kunin, C. M., 217, 335
Kvach, J. T., 623
Lang, D. J., 837, 841
Lawrence, H. S., 517
Lawrence, R. M., 117
Lederer, E., 771
Ledger, W. J., S30
Lee, J. D., 824
Lehmann, W. B., 999
Levison, M. E., S49
Lewis, W. P., S30
Liu, T.-Y., 94
Ljunggren, C., 473
Lopez, C. E., 875
Lorber, B., S40
Louie, T. J., S18
Louria, C. J., 195
Louria, D. B., S58
Love, K., S104
Luby, J. P., 659
Luecke, D., 51
Lusk, R. H., S111
MacGregor, R. R., 1
Mackel, D. C., 729
Mahmoud, A. A. F., 126, 341, 408, 493, 692, 868, 1017
Majer, M., 846
Maltseva, N. N., 358
Mandalcris, C. D., 210, 878
Mansheim, B. J., 787
Mantilla, G., 308
Marennikova, S. S., 358
Maresca, R. M., S99
Marshall, J. R., S35
Martin, R. R., 568
Mathias, R. G., S69
Mattar, M. E., 828
Matthei, M. J., 135, 145, 155, 167, 176, 183
McCall, C. E., 949
McCormack, W. M., 243, 392
McCormick, J. B., 103, 120
McDonald, P. J., 217
McIntosh, K., 135, 145, 155, 167, 176, 183
McLaughlin, J. C., 275
McLeod, C. G., 995
Mead, P., S46
Mehlman, I. J., 313
Meister, H., 224, 235
Menonna, J., 432
Miao, P. V. W., S80

Michaels, R. H., 641
Miller, L. H., 86, 855
Miyamura, K., 706
Modlin, J. F., 337
Moe, J. B., 985
Moe, P. J., 669
Mohan, K., 51
Montgomerie, J. Z., 294
Moon, H. M., 281
Moon, H. W., 531
Morrison, J. C., 267
Morrison, J. O., 294
Mortensen, I., 832
Mosher, D. F., 985
Mosley, J. W., 933
Mosovich, L. L., 828
Moxon, E. R., 303
Murphy, B. R., 714
Musher, D. M., 568
Myerowitz, R. L., 641
Nagy, B., 531
Nakano, J., 135
Nakauchi, D., S111
Narayan, O., 800, 962
Nazarewicz, T., 298
Neu, C. O., S120
Neu, H. C., S120, 807
Nichols, R. L., S54
Nightingale, C., 999
Nilsson-Ehle, I., 414
Nitzan, D., S13
Noble, G. R., 398
Notkins, A. L., 744
Nowosławski, A., 298
Ochs, H. D., 673
Ofek, I., 267
Ogra, P. L., 499
Olarte, J., 482, 1003
Olsen, R., 944
Onderdonk, A. B., S18
Ørskov, F., 94, 275, 313
Ørskov, I., 94, 275, 313
Ostrow, P. T., 303
Overall, J. C., Jr., 918
Pakes, S. P., 944
Parant, F., 771
Parant, M., 771
Paronetto, F., 1006
Pedersen, C. E., Jr., 995
Petit, J. F., 771
Petrilli, F. L., 252
Pettit, G. W., 646
Phair, J. P., 423, 952
Phillips, I. A., 135
Phuapradit, P., 706
Pickering, L. K., 1003
Pierce, N. F., 888
Polakavetz, S., 729
Potter, C. W., 423
Prescott, B., 524, 582
Price, R. W., 744
Prince, A., S120
Puziss, M., 865
Quarles, J. M., 42
Quintiliani, R., 999
Rabin, H. R., S104
Rabson, A. R., 113
Rahal, J. J., Jr., 108, 807
Rakela, J., 933
Ramirez-Ronda, C., 659
Reed, C. J., 201
Rein, M. F., 939
Remington, J. S., S99
Reynolds, D. W., 386
Reynolds, G., 939
Reynolds, H. Y., 438
Rice, P. A., 243, 649
Richman, D. D., 714
Richmond, A. S., 108
Ries, K., S49
Rinner, S., 659
Rizzone, C., 499
Robbins, F. C., 341
Robbins, J. B., 94
Robinson, D. M., 664
Rodprassert, P., 706
Rodríguez, M., 367
Rodriguez, V., 61
Rogers, S., S111
Rola-Pleszczynski, M., 386
Rolfe, U. T., 135, 145, 155, 167, 176
Ronald, A. R., S69
Roongwithu, N., 706
Root, R. K., 1
Rosner, B., 392
Rothenberg, K., 330
Rowe, N. H., 486
Rubi, E., 499
Rubin, R. J., 398
Rubin, W., S49
Ruch, G. L., 985
Sabath, L. D., 807
Sack, D. A., 275, 313
Sack, R. B., 275, 313, 888
Salaki, J., S58
Salyers, A. A., S13
Sande, M. A., 210, 878
Sanderlin, K. C., 486
Santoro, J., S49
Sapienza, V. J., 281
Sasagawa, A., 706
Schaefler, S., 108
Schäfer, H., 224, 235
Schanberger, J. E., 135, 145, 155, 167, 176
Schierl, E. A., 957
Schiffman, G., 582
Schmidt, L. H., 86
Schotz, M. C., 414
Schultz, M. G., 875
Scott, R. M., 79
Sefi, R., 673
Selander, D., 473
Sen, P., S58
Sen, T., 654
Senterfit, L., 582
Septimus, E. J., 568
Seshumurty, P., 611
Shadduck, J. A., 944
Shadomy, S., 970
Shimada, K., 850
Shvartsman, Y. S., 697
Sigurdson, E., S69
Silva, J., Jr., S111
Silverstein, A. M., 800
Simberkoff, M. S., 108
Sircar, B. K., 888
Siskin, S. B., S111
Ślusarczyk, J., 298
Smith, A. L., 34, 195
Smith, D. H., 34, 195
Smith, J. W., 577
Smorodintsev, A. A., 681
Snitbhan, R., 79
Snyder, M. J., 729
Snydman, D. R., 687
Solomons, N. W., 1
Sparling, P. F., 865
Spellacy, W. N., 308
Spertzel, R. O., 600
Srimarut, S., 79
St. Clair, L., 1
Stagno, S., 386
Steele, R. W., 593
Steere, A. C., 729
Steinberg, S., 1010
Stephenson, E. H., 911
Stevens, D. P., 126
Stevenson, D., 980
Stiver, H. G., S69
Stookey, J. L., 995
Strahilov, D., 965
Strausbaugh, L. J., 210, 878
Street, C. K., 824
Strickland, G. T., 408
Stringfellow, D. A., 540
Strussenberg, J., 499
Stuart-Harris, C. H., 423
Sumaya, C. V., 374
Sutter, V. L., S7
Suzuki, H., 259
Swartzberg, J. E., S99
Swenson, R. M., S40
Tajiri, E., 706
Tanticharoenyos, P., 79
Tedesco, F. J., S95
Tenney, J. H., 729
Thielen, P. F., 925
Thompson, T. R., 398
Thongcharoen, P., 706

Thornhill, T. S., 20
Thornsberry, C., S4, 649, 939
Tingpalapong, M., 79
Todd, W. A., 135, 145, 155
Tong, M. J., 980
Trocola, M., 507
Urmacher, S., 582
Utz, C. J., 970
Valdivieso, M., 61
Varallyay, S., 512
Vásquez, C., 367
Vejjajiva, A., 706
Vergne-Marini, P., 659
Vernace, S. J., 1006
Vik-Mo, H., 669
Vincent, M. M., 386
Waldman, R. H., 824
Walker, C. B., S13
Wallace, G. W., 490
Wallace, R. B., 482
Wallace, R. J., Jr., 568
Walz, M. A., 744
Warren, K. S., 126, 341, 408, 493, 692, 868, 1017
Washington, J. A. II, S23
Wasi, C., 706
Watanakunakorn, C., 952
Watson, W. T., 79
Weaver, R. E., 103
Webster, R. G., 678
Wehrle, P. F., 873, 925
Weinmann, E., 846
Weiss, K. E., 380
Weller, P. F., 34
Wenner, H. A., 611
Wheelock, E. F., 478
Whipp, S. C., 482
Whiting, D. A., 113
Wiesner, P. J., 865
Wietzerbin, J., 771
Wiles, T. I., 623
Wilkins, T. D., S13
Williams, R. G., 911
Wiseman, D. A., 736
Witte, J. J., 337
Wolantis, S., 28
Wong, J. F., 67
Wosu, N. J., 944
Wu, B. C., 990
Wyatt, R. G., 20
Wyler, D. J., 86
Yaffe, S. J., 828
Yamashiro, M., 850
Yarbrough, W. B., 201
Yoshikawa, T. T., 414
Young, E. J., 593
Young, J. A., 837
Young, S. K., 486
Yu, B., 349
Zappi, T., 1006
Zawaneh, S., 308
Zhilova, G. P., 681
Zidian, J. L., 633
Zinner, S. H., 392
Zykov, M. P., 681, 697

Subject Index

Abortion, septic, double-blind comparison of treatment with clindamycin or penicillin plus chloramphenicol, S35
Acute hemorrhagic conjunctivitis, in Thailand, association with enterovirus type 70, 706
Adenine arabinoside
  and adenine arabinoside 5′-monophosphate, in treatment of genital *H. hominis* type 2 infections in mice, 557
  and/or humoral antibodies, as therapy for *H. hominis* infections in mice, interactions with host defense factors, 468
  cellular immune responses to herpesviruses during treatment of infected patients, 593
  effect on Epstein-Barr virus in vitro, 447
Adverse reactions, gastrointestinal
  in patients receiving clindamycin, S89, S95, S99, S104, S120, S126, S133
  in patients receiving clindamycin or ampicillin, S111
Agar dilution, and disk diffusion, susceptibility testing of *Nocardia*, 568
Amikacin
  and tobramycin, compared in treatment of infection in patients with cancer, 61
  maternal-fetal pharmacology, 925
Amino acids, incorporation by human toxic neutrophils and uptake of 2-deoxy-D-glucose, 949
Aminoglycosides, plus penicillin, in vitro susceptibility of *S. faecalis*, 832
Amoxicillin, and ampicillin, comparisons of concentrations in serum and middle ear fluid of children with chronic otitis media, 999
Amphotericin B, in serum and cerebrospinal fluid, quantitation with high-pressure liquid chromatography, 414
Ampicillin
  and amoxicillin, comparison of concentrations in serum and middle ear fluid of children with chronic otitis media, 999
  and clindamycin
    diarrhea associated with therapy, S104
    gastrointestinal side effects associated with therapy, S111
  therapy of *H. influenzae* meningitis, comparison with cefamandole, 210, 878 (erratum)
Anaerobic bacteria
  and biliary disease in elderly patients, 850
  in vitro susceptibility, comparison of clindamycin and other antimicrobial agents, S7
Anaerobic bacterial infections
  clinical efficacy of clindamycin, S49
  in mice, experimental, treatment with clindamycin, S13
  overview of therapy, S25
Antibiotic resistance
  of *Salmonella* to chloramphenicol, 807
  summary of conference on penicillin-resistant *N. gonorrhoeae*, 865
Antibiotic susceptibility testing
  of *Nocardia* by disk diffusion and agar dilution, 568
  techniques for anaerobes, S4
Antibiotics
  see also specific drug
  guidelines and audits for use in hospitals, 335
  persistent effect on *S. aureus* after exposure for limited periods, 217
Antibody
  see also specific organism
  bactericidal, to *N. gonorrhoeae*, incidence in sera of patients with gonorrhea, 243
  humoral, to *H. hominis*, and/or adenine arabinoside, interaction with host defense factors in infections in mice, 468
  mycoplasmacidal and radioimmunoprecipitating, to *M. pneumoniae*, unexpectedly high frequency in human sera, 524
  neutralizing, IgG, and IgG to membrane antigens of varicella-zoster virus, determination by the immunoperoxidase technique, 975
  secretory and circulating, formation after immunization with live and inactivated influenza virus vaccines, 697
  to cytomegalovirus, rapid detections in sera by counterimmunoelectrophoresis, 432
  to enterovirus type 70 in patients with acute hemorrhagic conjunctivitis in Thailand, 706
  to varicella-zoster virus, measured by immune adherence hemagglutination, 1010
  to viral capsid and early antigens of Epstein-Barr virus in serum of adults, relation to endogenous reactivation of infection, 374
Antibody-coated bacteria, in urinary sediment of rabbits with pyelonephritis due to *E. coli* O6:K13:H1, 577
Antigen
  CF, of human cytomegalovirus, characterization, 281
  of *M. szulgai*, immunochemical analysis, 778
  serum hepatitis B, ionic requirements of DNA polymerase, 897
Antigenic activation, of cytomegalovirus by blood transfusion in mice, 841
Antigenicity, of cholera toxoid in humans, 512
Antigens
  Epstein-Barr virus, early and viral capsid, effect of adenine arabinoside on expression, 447
  isolated outer membrane of *N. gonorrhoeae*, induction of immunity in guinea pigs, 879
Argentine hemorrhagic fever, electron microscopy of effect of Junín virus on peripheral white blood cells and bone marrow from infected guinea pigs, 367
Artificial insemination, effect of cytomegalovirus on fertilization, infection, and embryogenesis in mice, 837
Ascariasis, diagnosis and management, 868
Assay, of amphotericin B in serum and cerebrospinal fluid by high-pressure liquid chromatography, 414
Bacille Calmette-Guérin, and immunomodulation of host resistance to experimental infection in mice, 763
Bacteremia

Bacteroidaceae, review of 92 cases, S69
H. influenzae type b, clearance rate, effect of encapsulation and host age, 34
pseudomonas, caused by contaminated normal human serum albumin, 729
Bacteroidaceae bacteremia, review of 92 cases, S69
Bacteroides fragilis
experimental infections in mice, treatment with clindamycin, S13
in biliary disease in elderly patients, 850
Bacteroides melaninogenicus subspecies *asaccharolyticus*, purification and characterization of outer membrane complex, 787
Bile acids, diarrhea, and antibiotics, data, speculation, and a unifying hypothesis, S126
Biliary disease, and anaerobic bacteria in elderly patients, 850
Blood transfusion, transmission and activation of cytomegalovirus in mice, 841
Bordetella bronchiseptica, pathogenesis of infection in dogs, 753
Bordetellosis, canine, pathogenesis, 753
Calves, comparison of infectivity of calf and human Hong Kong strains of influenza virus, 678
Cancer, and treatment of infection in patients, comparison of amikacin and tobramycin, 61
Candida, species variation in ocular pathogenicity in experimental hematogenous endophthalmitis, 294
Candida albicans
antifungal activity of 5-fluorocytosine measured by disk diffusion susceptibility testing, 970
role in granulomatous tissue reactions
in vitro degradation of *C. albicans* and immunospecificity of split products, 224
in vivo degradation of *C. albicans* in hepatic macrophages of mice, 235
synergistic infection with cytomegalovirus in mice, 918
Candida species, in patients with neoplastic disease, inconsistent correlation of immunodiffusion and agglutination test results with invasive infections, 349
Carbenicillin, and clindamycin, therapy of intraabdominal and female genital tract infections, S40
Carnivora, and Edentata, outbreak of pox disease in the Moscow Zoo, 358
Cefamandole, therapy of *H. influenzae* meningitis, comparison with ampicillin, 210, 878 (erratum)
Cephalosporins, therapy of experimental intraabdominal sepsis in rats, comparison with clindamycin plus gentamicin, S18
Chemoimmunotherapy, with adenine arabinoside and/or humoral antibodies, of *H. hominis* infection, 468
Chinese hamster ovary cell assay, for characterization of enterotoxins of *V. cholerae* and *E. coli*, 720
Chloramphenicol, resistance in *Salmonella*, 807
Cholera, enhanced immunity after parenteral-oral administration of toxoid to dogs, 888
Cholera toxoid, antigenicity in humans, 512
Chloramphenicol, and clindamycin, therapy of female genital tract infections, S30
Chromatography, high-pressure liquid, in quantitation of amphotericin B in serum and cerebrospinal fluid, 414
Clindamycin
adverse gastrointestinal reactions associated with therapy, S89, S95, S99, S104, S111, S120, S126, S133
and ampicillin
diarrhea associated with therapy, S104
gastrointestinal side effects associated with therapy, S111
and carbenicillin, therapy of intraabdominal and female genital tract infections, S40
and chloramphenicol, therapy of female genital tract infections, S30
and gentamicin
therapy of mixed bacterial infections, S74
therapy of suspected sepsis due to anaerobic and aerobic bacteria, S80
and other antibiotics, evaluation in treatment of anaerobic bacterial pulmonary infections, S58
colitis in treated patients, a review, S95
double-blind comparison with penicillin plus chloramphenicol in treatment of septic abortion, S35
in treatment of sepsis caused by decubitus ulcers, S65
in vitro activity against anaerobes, comparison with other antimicrobial agents, S7
in vitro activity and clinical efficacy in treatment of anaerobic bacterial infections, S49
plus gentamicin, comparison with cephalosporins in therapy of experimental intraabdominal sepsis in rats, S18
Clostridium perfringens, in biliary disease in elderly patients, 850
Coccidioidomycosis, pulmonary, in mice, reproducible method for induction, 117
Colitis
and diarrhea, associated with clindamycin therapy, incidence, S120
associated with clindamycin therapy, S95
Colonization, of porcine small intestine by K88-negative strains of *E. coli*, colonization and adhesion factors, 531
Complement, and coagulation systems during Rocky Mountain spotted fever in rhesus monkeys, 985
Complement fixation, for diagnosis of encephalitozoonosis in rabbits, 944
Conjunctivitis, acute hemorrhagic, in Thailand, association with enterovirus type 70, 706
Cord factor (6,6′-trehalose dimycolate), enhancement of nonspecific immunity to *M. tuberculosis*, 771
Coronavirus, human strain OC43, antigenic relationship to encephalomyelitis virus strain 67N of swine, antibody responses in human and animal sera, 201
Corynebacterium acnes, and immunomodulation of host resistaance to experimental infection in mice, 763
Corynebacterium parvum, and immunomodulation of host resistance to experimental infection in mice, 763
Counterimmunoelectrophoresis, rapid detection of antibodies to cytomegalovirus in serum, 432
Coxiella burnetii, strain M-44, Q fever-related lesions in infected guinea pigs, 995
Coxsackievirus A9, concurrent infection with herpes simplex virus type 2 in a patient with meningitis, 28
^{51}Cr-release assay, evaluation of specific lymphocyte-mediated cytotoxicity to cytomegalovirus in congenitally in-

fected infants and their mothers, 386
Cross-antigenicity, and immunogenicity, between capsular polysaccharides of group C *N. meningitidis* and *E. coli* K92, 94
Cryptococcus neoformans, antifungal activity of 5-fluorocytosine measured by disk diffusion susceptibility testing, 970
Cystic fibrosis, and pharmacokinetics of methicillin, 828
Cytomegalovirus
antibodies, rapid detection by counterimmunoelectrophoresis, 432
congenital infection in infants, impairment of cell-mediated immunity in mothers, 386
human, characterization of complement-fixing antigen, 281
murine
and sperm mixture, infection and fertilization of mice after artificial insemination, 837
enhancement of infection during host-vs.-graft reaction, 990
inhibition of T-cell function preceding clinical signs of infection, 478
suppressed immune response to interferon induction in infected mice, 540
synergistic infection with *C. albicans* in mice, 918
transmission and activation with blood transfusion in mice, 841
2-Deoxy-D-glucose, uptake by human toxic neutrophils and incorporation of amino acids, 949
Diarrhea
and colitis, associated with clindamycin therapy, S120
and enterotoxigenic *E. coli* in Mexican children, 482
associated with clindamycin and ampicillin therapy, S104
bile acids, and antibiotics, data, speculation, and a unifying hypothesis, S126
in rabbits, due to *E. coli* O15 (strain RDEC-1), which does not invade the mucosa or synthesize enterotoxin, 454
Disk diffusion susceptibility testing
and agar diffusion testing, of *Nocardia*, 568
of antifungal activity of 5-fluorocytosine, 970
DNA polymerase
associated with serum hepatitis B antigen, ionic requirements, 897
correlation with e antigen and Dane particles in chronic benign and active hepatitis B, 980
e antigen, correlation with DNA polymerase and Dane particles in chronic benign and active hepatitis B, 980
Edentata, and Carnivora, outbreak of pox disease in the Moscow Zoo, 358
Electron microscopy
of peripheral blood and bone marrow of guinea pigs infected with Junín virus, 367
ultrastructural differences in cells infected with herpes simplex virus types 1 and 2, 486
Encephalitozoon cuniculi, diagnosis of infection in rabbits by complement fixation, 944
Encephalitozoonosis, in rabbits, diagnosis by complement fixation, 944
Encephalomyelitis virus, strain 67N of swine, antigenic relationship to human coronavirus strain OC43, antibody responses in human and animal sera, 201
Encephalomyocarditis virus, suppressed response to interferon induction in infected mice, 540
Endophthalmitis, experimental hematogenous, due to *Candida*, species variation in ocular pathogenicity, 294
Endotoxemia, in rabbits, possibly caused by *S. aureus* enterotoxin B, 646
Enteric pathogens, isolation from asymptomatic students from the U.S. and Latin America, 1003
Enterotoxigenicity, of *E. coli*, variation, 195
Enterotoxin
assessment of pathogenicity of enteropathogenic *E. coli*, 736
of *V. cholerae* and *E. coli*, characterization by Chinese hamster ovary cell assay, 720
Enterotoxin B, of *S. aureus*, possible cause of endotoxemia in rabbits, 646
Enterovirus type 70, antibodies in patients with acute hemorrhagic conjunctivitis in Thailand, 706
Epidemiology
see also specific disease
of enterotoxigenic *E. coli* and diarrheal disease in Mexican children, 482
of hemodialysis-associated hepatitis B in the U.S., 1974, 687
of influenza B-associated Reye's syndrome in Michigan, 398
of leprosy in the U.S., 1971–1973, 120
of *N. meningitidis* infections in northern Norway, 1974–1975, 669
of rubella in the U.S., 1969–1975, 337
of St. Louis encephalitis, in the U.S., 1975, 1014
of typhoid fever epidemic in Mexico, related strains of *S. typhi* in the U.S., 649
of vaginal colonization with group B *Streptococcus* in college women, 392
Epstein-Barr virus
antibodies to viral capsid and early antigens, possible host immune response to endogenous reactivation of infection, 374
effect of adenine arabinoside in vitro, 447
Escherichia coli
characterization of enterotoxins by Chinese hamster ovary cell assay, 720
enteropathogenic serotypes, clinical and laboratory assessment of pathogenicity, 736
enteropathogenic K88-negative strains in colonization of porcine small intestine, colonization and adhesion factors, 531
enterotoxigenic
and diarrheal disease in Mexican children, 482
isolated from food, 313
isolated from patients at a hospital in Dacca, 275
toxigenic, isolated from asymptomatic students from the U.S. and Latin America, 1003
variation in enterotoxigenicity, 195
virulence-associated acquisition of iron and growth in mammalian serum, 623
Escherichia coli K92, and group C *N. meningitidis*, cross-antigenicity and immunogenicity of capsular polysaccha-

rides, 94
Escherichia coli O15, strain RDEC-1, production of diarrhea in rabbits by mechanisms other than invasion of mucosa and synthesis of enterotoxin, 454
Excretion, fecal, of hepatitis A virus in humans, 933
Fluids, infected extravascular, penetration of tobramycin and therapeutic effectiveness, 957
Flukes, liver, intestinal, and lung, diagnosis and management of infection, 692
5-Fluorocytosine, antifungal activity measured by disk diffusion susceptibility testing, 970
Francisella tularensis, live vaccine, effectiveness in prevention of laboratory-acquired tularemia, 55
Gastroenteritis
  acute, epidemic, in Japanese infants, fecal shedding of reovirus-like agent and serologic response, 259
  outbreaks, detection of viruslike particles in stools, 20
  severity in association with enteropathogenic *E. coli*, 736
Genital tract
  female, infections, treatment with clindamycin and other antibiotics, S30, S40
  female mouse, effect of immunization with herpes simplex virus types 1 and 2 on infection, 744
Gentamicin
  and clindamycin
    therapy of mixed bacterial infections, S74
    therapy of suspected sepsis due to anaerobic and aerobic bacteria, S80
  and penicillin, synergy against *L. monocytogenes* in ex vivo hemodialysis culture, 51
  nephrotoxicity in rabbits, associated pharmacologic factors, 952
Glucan, of *C. albicans*
  granuloma formation after injection into mice, 235
  localization and characterization, 224
Glucose, analogue, increased uptake by toxic neutrophils, 949
Gonorrhea
  immunity to *N. gonorrhoeae* induced by vaccination of guinea pigs with isolated outer membrane, 879
  serologic tests, 330
  test for serum bactericidal antibody to *N. gonorrhoeae*, 243
  treatment with trimethoprim-sulfamethoxazole, 939
Graft-vs.-host reaction, and enhancement of murine cytomegalovirus infection, 990
Granulocyte transfusions, and passive immunization with IgG antibodies to *P. aeruginosa*, prolongation of survival of leukopenic dogs with pseudomonas pneumonia, 438
Granulomatous tissue reactions, role of *C. albicans*, 224, 235
Haemophilus influenzae, meningitis, experimental, comparison of therapy with cefamandole and ampicillin, 210, 878 (erratum)
Haemophilus influenzae type b
  bacteremia, effect of encapsulation and host age on clearance rate, 34
  meningitis in infant rats, role of bacteremia in pathogenesis of age-dependent inflammatory responses in cerebrospinal fluid, 303
  potentiation of meningitis in rats by influenza A virus, 641
Haemophilus suis, in swine influenza, transmission by swine lungworms, 490
Hemodialysis culture, ex vivo
  growth of microbial and mammalian cells, 42
  technique for study of bactericidal synergism of penicillin and gentamicin against *L. monocytogenes*, 51
Hemodialysis-associated hepatitis, in the U.S., 1974, 687
Hepatitis, acute viral, diagnosis and management, 126
Hepatitis A virus, fecal excretion in humans, 933
Hepatitis B
  hemodialysis-associated, in the U.S., 1974, 687
  in subjects treated with drug containing immunoglobulins, 252
  prophylaxis with hepatitis B immune globulin among hospital staff, 473
Hepatitis B core antigen, from nuclei of human hepatocytes, immunochemical and morphological studies, 463
Hepatitis B immune globulin, in prevention of hepatitis B among hospital staff, 473
Hepatitis B virus
  correlation of e antigen, DNA polymerase, and Dane particles in chronic benign and active infections, 980
  transmission to gibbons by exposure to human saliva containing HB_s Ag, 79
Hepatitis B virus antigen
  cellular localization in patients with hepatocellular carcinoma and liver cirrhosis, 298
  ionic requirements of DNA polymerase, 897
Herpes simplex virus infections, recurrent, in vitro restoration of depressed motility of neutrophils from patients, 113
Herpes simplex virus types 1 and 2
  correlation of type with clinical features of infection, 28
  differences in infected cells as detected by electron microscopy, 486
  effect of immunization on acute and latent vaginouterine infections, 744
Herpes zoster, in renal transplant recipients, longitudinal serological study, 659
Herpesvirus hominis
  and immunomodulation of host resistance by *C. acnes*, *C. parvum*, and bacille Calmette-Guérin, 763
  infections in mice, therapy with adenine arabinoside and/or humoral antibodies, interaction with host defense factors, 468
Herpesvirus hominis type 2
  suppressed response to interferon induction in infected mice, 540
  treatment of genital infection in mice with phosphonoacetic acid, adenine arabinoside, and adenine arabinoside 5′-monophosphate, 557
Herpesviruses, cellular immune responses in infected patients during treatment with adenine arabinoside, 593
Immune adherence hemagglutination, for measurement of antibody to varicella-zoster virus, 1010
Immune electron microscopy, for detection of hepatitis A virus in human feces, 933
Immunity

see also specific disease or organism
cell-mediated
in humans after induced infection with influenza A virus, 714
in rubella, as measured by interferon synthesis in stimulated lymphocyte cultures, 380
to cytomegalovirus, impairment in mothers of congenitally infected infants, 386
to herpesviruses in infected patients treated with adenine arabinoside, 593
to *Y. pestis*, modulation by products from T-cells, 67
enhanced primary response and altered pattern of antibody class elicited in monkeys given Venezuelan equine encephalitis virus vaccine complexed with specific antibody, 600
passively transferred with T- or B-cells in *S. typhimurium*-infected mice, 813
to *M. pneumoniae*, possible limited duration, 673
Immunization
see also specific disease or vaccine
against cholera by parenteral-oral toxoid administration to dogs, 888
against influenza with live virus, problems, 681
against tularemia, with live *F. tularensis* vaccine, 55
of guinea pigs with isolated outer membranes of *N. gonorrhoeae*, 879
of rhesus monkeys with antigen-antibody complexes of Venezuelan equine encephalomyelitis virus, 600
passive, with IgG antibody to *P. aeruginosa* plus granulocyte transfusions, prolongation of survival in leukopenic dogs with pseudomonas pneumonia, 438
with attenuated influenza virus vaccine against homologous and heterologous strains of virus, 284
with herpes simplex virus types 1 and 2, effect on vaginouterine infections, 744
with neuraminidase-specific influenza A virus vaccine, evaluation in humans, 499
with surface antigen-adsorbed influenza A/Port Chalmers/73 virus vaccine, and dose-response relationship, 423
Immunochemistry
analysis of a major antigen of *M. szulgai*, 778
and morphology, of hepatitis B core antigen from human hepatocytes, 463
characterization and purification of outer membrane complex of *B. melaninogenicus* subspecies *asaccharolyticus*, 787
Immunofluorescence, for detection of common antigenic determinants in unrelated gram-negative bacteria and their lipopolysaccharides, 965
Immunoperoxidase technique, for determination of neutralizing, IgG, and IgG antibodies to membrane antigens of varicella-zoster virus, 975
Immunosuppression, effect of *T. gondii* infection on host response to *S. mansoni* in mice, 408
Infection, wound, with *P. pseudomallei*-like organism from soil, 103
Infections
bacterial (mixed), treatment with clindamycin and gentamicin, S74
pulmonary, due to anaerobic bacteria, evaluation of therapy with clindamycin and other antibiotics, S58
Infectious diseases, prevention through immunization, 318
Influenza, swine, and lungworms, 490
Influenza A virus
cell-mediated immune response after induced infection in humans, 714
potentiation of meningitis due to *H. influenzae* type b in rats, 641
Influenza A2 virus, suppressed response to interferon induction in infected mice, 540
Influenza B, in Michigan, associated with Reye's syndrome, 398
Influenza virus vaccines
attenuated, against homologous and heterologous strains of virus, 824
live, problems in prophylaxis of influenza, 681
live and inactivated, formation of secretory and circulating antibodies after immunization, 697
neuraminidase-specific A, clinical and immunologic evaluation in humans, 499
surface antigen-adsorbed A/Port Chalmers/73, dose-response relationship after immunization, 423
Influenza viruses, comparison of human Hong Kong and calf strains in infection of calves, 678
Interferon
human, administration to rabies virus-infected monkeys, 846
increased production by human lymphocyte cultures immune to rubella after stimulation with rubella virus, 380
suppressed response to induction in mice infected with encephalomyocarditis virus, Semliki Forest virus, influenza A2 virus, *H. hominis* type 2, or murine cytomegalovirus, 540
Intestinal flukes, diagnosis and management of infection, 692
Iron, virulence-associated acquisition by *E. coli* in mammalian serum, 628
Junín virus, infection in guinea pigs, electron microscopy of peripheral blood and bone marrow, 367
Kidney failure, polymorphonuclear leukocytes from patients, adherence, phagocytosis, and bactericidal activity in vitro, 1
Klebsiella-Enterobacter, in biliary disease in elderly patients, 850
Lassa fever, diagnosis and management, 341
Leprosy, in the U.S., 1971–1973, epidemiology, 120
Levamisole
in vitro enhancement of proliferation of human lymphocytes and phagocytosis by macrophages, 517
in vitro restoration of depressed motility of neutrophils from patients with herpes simplex virus infections, 113
Lipopolysaccharides, of unrelated gram-negative bacteria, detection of common antigenic determinants by immunofluorescence, 965
Lipoteichoic acid, of streptococci, postnatal development of binding by oral mucosal cells of humans, 267
Listeria monocytogenes, bactericidal synergism of penicillin and gentamicin in ex vivo hemodialysis culture, 51

Liver flukes, diagnosis and management of infection, 692
Loosli, C. G., 1905–1976, 873
Lung flukes, diagnosis and management of infection, 692
Lungworms (*Metastrongylus*), and swine influenza, 490
Lymphocytes
depression after experimental infection of humans with influenza A virus, 714
from rubella-immune individuals, increased production of interferon after stimulation with rubella virus, 380
human, in vitro enhancement of proliferation by levamisole, and enhanced phagocytosis by macrophages, 517
passive transfer of T- and B-cells for *S. typhimurium*-infected mice, 813
Malaria
quartan, due to *P. inui*, protective and suppressive roles of spleen in host defense, 86
transfusion, incidence and standards for blood donor selection, 875
Malaria vaccine, current prospects and problems, 855
Mannan, of *C. albicans*, localization, characterization, and immunologic studies, 224, 235
Media
for isolation of *Vibrio* species, comparison of sucrose teepol tellurite agar with others, 654
requirements for growth of *U. urealyticum*, 507
Medical Lake macaque virus, clinical and pathologic studies of disease in cynomolgus monkeys, 611
Meningitis
due to *H. influenzae*, experimental, comparison of therapy with cefamandole and ampicillin, 210, 878 (erratum)
due to *H. influenzae* type b
potentiation in rats by influenza A virus, 641
role of bacteremia in pathogenesis of age-dependent inflammatory responses in cerebrospinal fluid of infant rats, 303
Methicillin, pharmacokinetics in patients with cystic fibrosis, 828
Monkeys, silvered leaf, antibody responses and rickettsemia after infection with *R. tsutsugamushi*, 664
Morphology, and immunochemistry, of hepatitis B core antigen from human hepatocytes, 463
Mycobacterium szulgai, immunochemical analysis of a major antigen, 778
Mycobacterium tuberculosis, and cord factor (6,6′-trehalose dimycolate) in enhancement of nonspecific immunity, 771
Mycoplasma pneumoniae
attachment, and distribution of ciliated epithelial cells in hamster trachea, 9
mycoplasmacidal and radioimmunoprecipitating antibodies, unexpectedly high frequency in human sera, 524
second attacks of pneumonia within two and one-half to 10 years, 673
Neisseria gonorrhoeae
immunity to infection induced by vaccination of guinea pigs with isolated outer membranes, 879
incidence of bactericidal antibody in sera of patients with gonorrhea, 243
penicillin-resistant, summary of a conference, 865
treatment with trimethoprim-sulfamethoxazole, 939
Neisseria meningitidis
epidemic disease in northern Norway due mainly to group B, 1974–1975, 669
group C, and *E. coli* K92, cross-antigenicity and immunogenicity between capsular polysaccharides, 94
Neoplastic disease, inconsistent correlation of immunodiffusion and agglutination test results for *Candida* with invasive disease, 349
Nephrotoxicity, of gentamicin in rabbits, associated pharmacologic factors, 952
Neutrophils
human, toxic, incorporation of amino acids and uptake of 2-deoxy-D-glucose, 949
motility, depressed in patients with herpes simplex virus infection, in vitro restoration with levamisole, 113
Nocardia, susceptibility to 13 antimicrobial agents by disk diffusion and agar dilution methods, 568
O-antigen, antibody-coated bacteria in urinary sediment of rabbits with *E. coli* O6:K13:H1 pyelonephritis as indication of local immune response, 577
Otitis media, chronic, comparison of amoxicillin and ampicillin concentrations in serum and middle ear fluid of children, 999
Penicillin
and gentamicin, synergism against *L. monocytogenes* in ex vivo hemodialysis culture, 51
plus aminoglycosides, susceptibility of *S. faecalis*, 832
plus chloramphenicol, double-blind comparison with clindamycin in treatment of septic abortion, 835
resistance of *N. gonorrhoeae*, summary of a conference, 865
Penicillins, semisynthetic, and cephalothin, resistance of *S. aureus*, 108
Phagocytosis, by macrophages in vitro, induced enhancement by levamisole, and enhanced proliferation of human lymphocytes, 517
Pharmacokinetics, of methicillin in patients with cystic fibrosis, 828
Pharmacology, maternal-fetal, of amikacin, 925
Phosphonoacetic acid, treatment of genital *H. hominis* type 2 infections in mice, 557
Plague, pneumonic, protection of vervets by oral administration of live attenuated *Y. pestis* vaccine, 289
Plasmodium inui, malaria, protective and suppressive roles of spleen in host defense, 86
Pneumonia
due to *M. pneumoniae*, second attacks within two and one-half to 10 years, 673
due to *P. aeruginosa* in leukopenic dogs, prolongation of survival by passive immunization with IgG and granulocyte transfusions, 438
Polymorphonuclear leukocytes, from patients with renal failure, adherence, phagocytosis, and bactericidal activity in vitro, 1
Polysaccharide, capsular

of group C *N. meningitidis* and *E. coli* K92, cross-antigenicity and immunogenicity, 94
of *H. influenzae* type b, role in clearance of bacteremia, 34
Potentiation, of meningitis due to *H. influenzae* in rats by influenza A virus, 641
Pox disease, among Carnivora and Edentata in the Moscow Zoo, 358
Presbytis cristatus (silvered leaf monkeys), antibody responses and rickettsemia after infection with *R. tsutsugamushi*, 664.
Prophylaxis, of influenza, problems with live virus vaccine, 681
Pseudomembranous enterocolitis
review of its diverse forms, S89
sequela of clindamycin therapy, S99, S104, S111
Pseudomonas aeruginosa, pneumonia in leukopenic dogs, prolongation of survival by passive immunization with IgG and granulocyte transfusions, 438
Pseudomonas pseudomallei-like organism from soil, wound infection, case report and epidemiologic study, 103
Pseudomonas species, bacteremia due to contaminated normal human serum albumin, 729
Pyelonephritis, due to *E. coli* O6:K13:H1 in rabbits, antibody-coated bacteria in urinary sediment as indication of local immune response to O-antigen, 577
Q fever-related lesions, in guinea pigs infected with *C. burnetii* strain M-44, 995
Rabies virus, in monkeys, treatment of infection with human interferon after exposure, 846
Reovirus-like agent in acute epidemic gastroenteritis in Japanese infants, fecal shedding and serologic response, 259
Reye's syndrome, in Michigan, association with influenza B, 398
Rickettsemia, and antibody response in silvered leaf monkeys infected with *R. tsutsugamushi*, 664
Rickettsia rickettsii
coagulation and complement systems during Rocky Mountain spotted fever in rhesus monkeys, 985
dog model for Rocky Mountain spotted fever, 911
Rickettsia tsutsugamushi, rickettsemia and antibody responses in experimentally infected silvered leaf monkeys, 664
Rocky Mountain spotted fever
coagulation and complement systems in rhesus monkeys, 985
disease model of *R. rickettsii* infection in the dog, 911
Rubella, status in the U.S., 1969–1975, 337
Rubella virus, stimulation of interferon production in lymphocyte cultures from immune individuals, 380
Saliva, human, containing HB_sAg, transmission of hepatitis B virus to gibbons, 79
Salmonella
resistant to chloramphenicol, 807
toxigenic, isolated from asymptomatic students from the U.S. and Latin America, 1003
Salmonella minnesota, in detection of common lipopolysaccharide determinants of unrelated gram-negative bacteria by immunofluorescence, 965
Salmonella typhi, chloramphenicol-resistant, related to 1972–1973 Mexican epidemic strain, causing disease in the U.S., 649
Salmonella typhimurium infection, protection of mice with passively transferred immune T- or B-cells, 813
Schistosoma mansoni, immunosuppressive effect of *T. gondii* infection on host granulomatous responses in mice, 408
Semliki Forest virus, suppressed response to interferon induction in infected mice, 540
Sepsis
intraabdominal
characterization and treatment, S54
experimental comparison of therapy with cephalosporins with clindamycin plus gentamicin, S18
suspected, due to aerobic and anaerobic bacteria, therapy with clindamycin and gentamicin, S80
Serology, inconsistent correlation of immunodiffusion and agglutination test results with invasive candidiasis in patients with neoplastic disease, 349
Serum albumin, contaminated normal human and pseudomonas bacteremia, 729
Shigella flexneri and *S. sonnei*, toxin production in vitro and antitoxin in infected humans, 552
Simian virus 40-induced tumors, inhibition by antisera to fetal hamster tissue, 962
Slow virus infection, replication and persistence of visna virus in sheep, 800
Smallpox, diagnosis and management, 341
Smallpox vaccine
basic study and laboratory standardization, 135
primary percutaneous vaccination, 145
primary subcutaneous vaccination, 167
standard percutaneous revaccination of children
after primary percutaneous vaccination, 155
after primary subcutaneous vaccination, 176
Smallpox vaccines, clinical and serologic study of four vaccines, comparison of variations of dose and route of administration, 131–186
St. Louis encephalitis, incidence in the U.S., 1975, 1014
Staphylococcus aureus
enterotoxin B, possible cause of endotoxemia in rabbits, 646
normal phagocytosis by polymorphonuclear leukocytes from patients with renal failure, 1
persistent effect of antibiotics after exposure for limited periods of time, 217
resistance to semisynthetic penicillins and cephalothins, 108
Streptococci, and lipoteichoic acid, postnatal development of binding by oral mucosal cells of humans, 267
Streptococcus, group B
rectal colonization, relation to vaginal colonization of pregnant women, 308
vaginal colonization of college women, 392
Streptococcus faecalis, in vitro susceptibility to penicillin plus an aminoglycoside, 832
Streptococcus pneumoniae type 1, in vitro preparation and characterization of temperature-sensitive mutants, 582
Sucrose teepol tellurite agar, improved isolation of *Vibrio*

species, 654
Swine influenza, and lungworms, 490
Synergism, of penicillin and gentamicin against *L. monocytogenes* in ex vivo hemodialysis culture, 51
Synergy, of cytomegalovirus and *C. albicans* infection in mice, 918
T-cells
products, modulation of cellular immune response to *Y. pestis*, 67
progressive inhibition of function preceding clinical signs of cytomegalovirus infection in mice, 478
Temperature-sensitive mutants, of *S. pneumoniae* type I, in vitro preparation and characterization, 582
Tobramycin
and amikacin, comparison in treatment of infection in patients with cancer, 61
penetration into infected extravascular fluids and therapeutic effectiveness, 957
Torulopsis glabrata, antifungal activity of 5-fluorocytosine measured by disk diffusion susceptibility testing, 970
Toxin, and antitoxin, in *S. flexneri* and *S. sonnei* infections in humans, 552
Toxocara canis, detection of larva-specific antibody in patients with visceral larva migrans, 633
Toxocariasis, diagnosis and management, 868
Toxoplasma gondii
diagnosis and management of infection, 493
immunosuppressive effect of infection on host response to *S. mansoni* in mice, 408
Toxoplasmosis, diagnosis and management, 493
Trachea, hamster, distribution of ciliated epithelial cells, and attachment of *M. pneumoniae*, 9
Tracheobronchitis, due to *B. bronchiseptica* in dogs, 753
Transplants, renal, longitudinal serological study of recipients with herpes zoster, 659
6,6′-Trehalose dimycolate, enhancement of nonspecific immunity to *M. tuberculosis*, 771
Trimethoprim-sulfamethoxazole, therapy of gonorrhea, 939
Tularemia, laboratory-acquired, effect of live *F. tularensis* vaccine in prevention, 55
Tumors, induced by simian virus 40, inhibition by antisera to fetal hamster tissue, 962
Typhoid fever
diagnosis and mangement, 1017
in the U.S., due to chloramphenicol-resistant strains of *S. typhi* related to a 1972–1973 Mexican epidemic strain, 649
Ulcers, decubitus, cause of sepsis, treatment with clindamycin, S65
Ureaplasma urealyticum, differential growth requirements of four strains, 507
Vaccine
see also specific organism or disease
C. burnetii strain M-44, Q fever-related lesions in infected guinea pigs, 995
F. tularensis, live, effect in prevention of laboratory-acquired tularemia, 55
influenza virus
live, problems of prophylaxis, 681
live and inactivated, formation of secretory and circulating antibodies after immunization, 697
neuraminidase-specific A, clinical and immunologic evaluation in humans, 499
surface antigen-adsorbed A/Port Chalmers/73, dose-response relationship after immunization, 423
smallpox, clinical and serological study of four vaccines, comparison of variations of dose and route of administration, 131–186
Y. pestis, live, attenuated, protection of vervets, 289
Vaginal colonization, with group B *Streptococcus* in college women, 392
Vaginouterine infection, effect of immunization with herpes simplex virus types 1 and 2, 744
Varicella, in cynomolgus monkeys infected with Medical Lake macaque virus, 611
Varicella-zoster virus
antibody, measured by immune adherence hemagglutination, 1010
determination of neutralizing and IgG antibody and antibody to membrane antigens by immunoperoxidase technique, 975
longitudinal serological study in infected renal transplant recipients, 659
Venezuelan equine encephalomyelitis virus vaccine, complexed with specific antibody, enhanced primary immune response in monkeys, 600
Vibrio cholerae
characterization of enterotoxins and antitoxin by Chinese hamster ovary cell assay, 720
toxoid
antigenicity in humans, 512
parenteral-oral administration for enhancement of immunity in dogs, 888
Vibrio species, improved isolation with sucrose teepol tellurite agar, 654
Viral hepatitis, acute, diagnosis and management, 126
Viral transformation, inhibition of simian virus 40-induced tumors by antisera to fetal hamster tissue, 962
Virulence, of *E. coli*, and acquisition of iron in mammalian serum, 623
Viruslike particles, in stools, associated with outbreaks of gastroenteritis, 20
Visceral larva migrans
diagnosis and management, 868
larva-specific antibodies in patients, 633
Visna virus, replication and persistence in sheep, 800
Yellow fever, diagnosis and management, 341
Yersinia pestis
cellular immune response modulated by products from T-cells, 67
live, attenuated, oral administration and protection of vervets against pneumonic plague, 289

The Journal of Infectious Diseases

Official Publication of the Infectious Diseases Society of America

Edward H. Kass, *Editor*
K. Frank Austen, *Associate Editor*
John F. Enders, *Associate Editor*
Bernard N. Fields, *Associate Editor*
William R. McCabe, *Associate Editor*
Morton N. Swartz, *Associate Editor*
Louis Weinstein, *Associate Editor*
Mary M. Eichhorn Adams, *Assistant Editor*
Carole L. Ju, *Managing Editor*
Ruth Linn Weinstein, *Editorial Assistant*

EDITORIAL BOARD

Robert M. Chanock, Bethesda, Md.
Leighton E. Cluff, Gainesville, Fla.
Calvin M. Kunin, Madison, Wis.
Alexander D. Langmuir, Boston, Mass.
Franklin Neva, Bethesda, Md.
John C. Sherris, Seattle, Wash.
James Steele, Houston, Tex.
John P. Utz, Washington, D.C.
Sheldon M. Wolff, Bethesda, Md.
Martha Yow, Houston, Tex.

INTERNATIONAL BOARD OF EDITORS

Louis Chedid, Paris, France
Frank Fenner, Canberra, Australia
W. R. O. Goslings, Leiden, Netherlands
Per Hedlund, Gothenburg, Sweden
Janusz Jeljaszewicz, Warsaw, Poland
Kiyoshi Konno, Sendai, Japan
A. A. Miles, London, England
Ciro A. Peluffo, Montevideo, Uruguay

Volume 135

January–June 1977

All rights reserved
THE UNIVERSITY OF CHICAGO PRESS, CHICAGO
THE UNIVERSITY OF CHICAGO PRESS LTD., LONDON S.W. 1

© 1977 BY THE UNIVERSITY OF CHICAGO
PUBLISHED MONTHLY JANUARY-JUNE

Printed in U.S.A.

The Journal of Infectious Diseases

Volume 135 • *January 1977* • *Number 1*

Contents

Major Articles

Granulocyte Function in Patients with Chronic Renal Failure: Surface Adherence, Phagocytosis, and Bactericidal Activity in Vitro. E. Abrutyn, N. W. Solomons, L. St. Clair, R. R. MacGregor, and R. K. Root 1

Differential Distribution of Ciliated Epithelial Cells in the Trachea of Hamsters: Implications for Studies of Pathogenesis. Michael G. Gabridge, C. Coe Agle, and A. M. Cameron 9

Detection by Immune Electron Microscopy of 26- to 27-nm Viruslike Particles Associated with Two Family Outbreaks of Gastroenteritis. Thomas S. Thornhill, Richard G. Wyatt, Anthony R. Kalica, Raphael Dolin, Robert M. Chanock, and Albert Z. Kapikian 20

Correlation of Herpes Simplex Virus Types 1 and 2 with Clinical Features of Infection. Sigvard Wolontis and Stig Jeansson 28

The Role of Encapsulation and Host Age in the Clearance of *Haemophilus influenzae* Bacteremia. Peter F. Weller, Arnold L. Smith, Porter Anderson, and David H. Smith 34

Ex Vivo Hemodialysis Culture of Microbial and Mammalian Cells. Philipp Gerhardt, John M. Quarles, Teofila Cabrera Beaman, and Ralph C. Belding 42

Synergism of Penicillin and Gentamicin against *Listeria monocytogenes* in Ex Vivo Hemodialysis Culture. Kanwal Mohan, Ralph C. Gordon, Teofila Cabrera Beaman, Ralph C. Belding, Donald Luecke, Charles Edmiston, and Philipp Gerhardt 51

Immunization against Tularemia: Analysis of the Effectiveness of Live *Francisella tularensis* Vaccine in Prevention of Laboratory-Acquired Tularemia. Donald S. Burke 55

Comparison of Amikacin and Tobramycin in the Treatment of Infection in Patients with Cancer. Ronald Feld, Manuel Valdivieso, Gerald P. Bodey, and Victorio Rodriguez 61

Cellular Immune Response to *Yersinia pestis* Modulated by Product(s) from Thymus-Derived Lymphocytes. John F. Wong and Sanford S. Elberg 67

Transmission of Hepatitis B Virus to Gibbons by Exposure to Human Saliva Containing Hepatitis B Surface Antigen. William H. Bancroft, Rapin Snitbhan, Robert McNair Scott, Markpol Tingpalapong, William T. Watson, Prayot Tanticharoenyos, Jerome J. Karwacki, and Suranga Srimarut 79

Spleen Function in Quartan Malaria (Due to *Plasmodium inui*): Evidence for Both Protective and Suppressive Roles in Host Defense. David J. Wyler, Louis H. Miller, and Leon H. Schmidt 86

Cross-Antigenicity and Immunogenicity between Capsular Polysaccharides of Group C *Neisseria meningitidis* and of *Escherichia coli* K92. Mary P. Glode, John B. Robbins, Teh-Yung Liu, Emil C. Gotschlich, Ida Ørskov, and Frits Ørskov 94

Notes

Wound Infection by an Indigenous *Pseudomonas pseudomallei*-Like Organism Isolated from the Soil: Case Report and Epidemiologic Study. Joseph B. McCormick, Robert E. Weaver, Peggy S. Hayes, John M. Boyce, and Roger A. Feldman 103

Resistance of *Staphylococcus aureus* to Semisynthetic Penicillins and Cephalothin. Alma S. Richmond, Michael S. Simberkoff, Sam Schaefler, and James J. Rahal, Jr. 108

Depressed Neutrophil Motility in Patients with Recurrent Herpes Simplex Virus Infections: In Vitro Restoration with Levamisole. ARTHUR R. RABSON, DAVID A. WHITING, RONALD ANDERSON, ANNEMARIE GLOVER, and HENDRIK J. KOORNHOF 113

Reproducible Method for Induction of Pulmonary Coccidioidomycosis in Mice. RUTH M. LAWRENCE, ALICE C. HUSTON, and PAUL D. HOEPRICH 117

From the Center for Disease Control

Leprosy in the United States, 1971–1973. GRANT S. GOLDEN, JOSEPH B. MCCORMICK, and DAVID W. FRASER 120

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XVIII. Acute Viral Hepatitis. D. P. STEVENS, K. S. WARREN, and A. A. F. MAHMOUD 126

Sponsored by the National Institute of Allergy and Infectious Diseases

A Clinical and Serologic Study of Four Smallpox Vaccines Comparing Variations of Dose and Route of Administration. Guest Editors: GEORGE J. GALASSO (Chairman), DAVID T. KARZON, SAMUEL L. KATZ, SAUL KRUGMAN, JOHN NEFF, and FREDERICK C. ROBBINS 131

Basic Study and Laboratory Standardization. ABRAM S. BENENSON, JAMES D. CHERRY, KENNETH MCINTOSH, JAMES D. CONNOR, DAVID W. ALLING, JAMES NAKANO, URSULA T. ROLFE, JOHN E. SCHANBERGER, WARREN A. TODD, FERNANDO DECASTRO, FRANCES L. HORVATH, AURORA BAIRAN, IRVING A. PHILLIPS, GEORGE J. GALASSO, and MARTHA J. MATTHEIS 135

Primary Percutaneous Vaccination. JAMES D. CHERRY, KENNETH MCINTOSH, JAMES D. CONNOR, ABRAM S. BENENSON, DAVID W. ALLING, URSULA T. ROLFE, WARREN A. TODD, JOHN E. SCHANBERGER, and MARTHA J. MATTHEIS 145

Standard Percutaneous Revaccination of Children Who Received Primary Percutaneous Vaccination. KENNETH MCINTOSH, JAMES D. CHERRY, ABRAM S. BENENSON, JAMES D. CONNOR, DAVID W. ALLING, URSULA T. ROLFE, WARREN A. TODD, JOHN E. SCHANBERGER, and MARTHA J. MATTHEIS 155

Primary Subcutaneous Vaccination. JAMES D. CONNOR, KENNETH MCINTOSH, JAMES D. CHERRY, ABRAM S. BENENSON, DAVID W. ALLING, URSULA T. ROLFE, JOHN E. SCHANBERGER, and MARTHA J. MATTHEIS 167

Standard Percutaneous Revaccination of Children Who Received Primary Subcutaneous Vaccination. JAMES D. CHERRY, JAMES D. CONNOR, KENNETH MCINTOSH, ABRAM S. BENENSON, DAVID W. ALLING, URSULA T. ROLFE, JOHN E. SCHANBERGER, and MARTHA J. MATTHEIS 176

Summary. GEORGE J. GALASSO, MARTHA J. MATTHEIS, JAMES D. CHERRY, JAMES D. CONNOR, KENNETH MCINTOSH, ABRAM S. BENENSON, and DAVID W. ALLING 183

Notices 187

Statement of Editorial Policy 188

Instructions to Authors and Use of Abbreviations 191

Volume 135 • *February 1977* • *Number 2*

Major Articles

Variation in Enterotoxigenicity of *Escherichia coli*. PETER ECHEVERRIA, C. JEAN LOURIA, ARNOLD L. SMITH, and DAVID SMITH 195

Antigenic Relationship between Human Coronavirus Strain OC 43 and Hemagglutinating Encephalomyelitis Virus Strain 67N of Swine: Antibody Responses in Human and Animal Sera. HAROLD S. KAYE, WILMA B. YARBROUGH, CAROL J. REED, and ALYNE K. HARRISON ... 201

Cefamandole and Ampicillin Therapy in Experimental *Haemophilus influenzae* Meningitis. LARRY J. STRAUSBAUGH, CHRISTOPHER D. MANDALERIS, and MERLE A. SANDE ... 210

Persistent Effects of Antibiotics on *Staphylococcus aureus* after Exposure for Limited Periods of Time. PETER J. MCDONALD, WILLIAM A. CRAIG, and CALVIN M. KUNIN ... 217

Role of *Candida albicans* in Granulomatous Tissue Reactions. I. In Vitro Degradation of *C. albicans* and Immunospecificity of Split Products. H. MEISTER, B. HEYMER, H. SCHÄFER, and O. HAFERKAMP ... 224

Role of *Candida albicans* in Granulomatous Tissue Reactions. II. In Vivo Degradation of *C. albicans* in Hepatic Macrophages of Mice. H. MEISTER, B. HEYMER, H. SCHÄFER, and O. HAFERKAMP ... 235

Bactericidal Antibody in Genital Infection Due to *Neisseria gonorrhoeae*. DENNIS L. KASPER, PETER A. RICE, and WILLIAM M. MCCORMACK ... 243

Hepatitis B in Subjects Treated with a Drug Containing Immunoglobulins. FERNANDO LUIGI PETRILLI, PIETRO CROVARI, and SILVIO DE FLORA ... 252

Reovirus-Like Agent in Acute Epidemic Gastroenteritis in Japanese Infants: Fecal Shedding and Serologic Response. TASUKE KONNO, HIROSHI SUZUKI, AKI IMAI, and NAKAO ISHIDA ... 259

Postnatal Development of Binding of Streptococci and Lipoteichoic Acid by Oral Mucosal Cells of Humans. ITZHAK OFEK, EDWIN H. BEACHEY, FABIAN EYAL, and JOHN C. MORRISON ... 267

Enterotoxigenic *Escherichia coli* Isolated from Patients at a Hospital in Dacca. DAVID A. SACK, JAMES C. MCLAUGHLIN, R. BRADLEY SACK, FRITS ØRSKOV, and IDA ØRSKOV ... 275

Complement-Fixing Antigen of Human Cytomegaloviruses. K. S. KIM, H. M. MOON, V. J. SAPIENZA, and R. I. CARP ... 281

Notes

Immunity in Plague: Protection of the Vervet (*Cercopithecus aethiops*) against Pneumonic Plague by the Oral Administration of Live Attenuated *Yersinia pestis*. T. H. CHEN, SANFORD S. ELBERG, and DANIEL M. EISLER ... 289

Experimental Hematogenous Endophthalmitis Due to *Candida*: Species Variation in Ocular Pathogenicity. JOHN E. EDWARDS, JR., JOHN Z. MONTGOMERIE, KENJI ISHIDA, JOAN O. MORRISON, and LUCIEN B. GUZE ... 294

Cellular Localization of Hepatitis B Virus Antigens in Patients with Hepatocellular Carcinoma Coexisting with Liver Cirrhosis. TERESA NAZAREWICZ, K. KRAWCZYŃSKI, J. ŚLUSARCZYK, and A. NOWOSŁAWSKI ... 298

Haemophilus influenzae Meningitis in Infant Rats: Role of Bacteremia in Pathogenesis of Age-Dependent Inflammatory Responses in Cerebrospinal Fluid. E. RICHARD MOXON and PETER T. OSTROW ... 303

Rectal Colonization with Group B *Streptococcus*: Relation to Vaginal Colonization of Pregnant Women. MOHAMAD S. BADRI, SAM ZAWANEH, AMELIA C. CRUZ, GONZALO MANTILLA, HERMAN BAER, WILLIAM N. SPELLACY, and ELIA M. AYOUB ... 308

Enterotoxigenic *Escherichia coli* Isolated from Food. R. BRADLEY SACK, DAVID A. SACK, IRA J. MEHLMAN, FRITS ØRSKOV, and IDA ØRSKOV ... 313

Special Article

Prevention through Immunization: New Opportunities or End of the Road? RICHARD M. KRAUSE ... 318

Editorials

Gonococcal Serology: How Soon, How Useful, and How Much? PETER E. DANS, RICHARD ROTHENBERG, and KING K. HOLMES ... 330

Guidelines and Audits for Use of Antimicrobial Agents in Hospitals. CALVIN M. KUNIN ... 335

From the Center for Disease Control

Current Status of Rubella in the United States, 1969–1975. GREGORY F. HAYDEN, JOHN F. MODLIN and JOHN J. WITTE ... 337

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XIX. Major Tropical Viral Infections: Smallpox, Yellow Fever, and Lassa Fever. F. C. ROBBINS, A. A. F. MAHMOUD, and K. S. WARREN ... 341

Erratum (Warren, K. S. and Mahmoud, A. A. F., 133:596–601) ... 347

Erratum (The Meningococcal Disease Surveillance Group, 133:201–204) ... 347

Erratum (Edsall, G., 134:314–315) ... 347

Volume 135 • *March 1977* • *Number 3*

Major Articles

Immunodiffusion and Agglutination Tests for *Candida* in Patients with Neoplastic Disease: Inconsistent Correlation of Results with Invasive Infections. GREG FILICE, BESSIE YU, and DONALD ARMSTRONG ... 349

Outbreak of Pox Disease among Carnivora (Felidae) and Edentata. SVETLANA S. MARENNIKOVA, NELLY N. MALTSEVA, VALERIA I. KORNEEVA, and NATALIA M. GARANINA ... 358

Junín Virus Infection of Guinea Pigs: Electron Microscopic Studies of Peripheral Blood and Bone Marrow. GUADALUPE CARBALLAL, M. RODRÍGUEZ, M. J. FRIGERIO, and C. VÁSQUEZ ... 367

Endogenous Reactivation of Epstein-Barr Virus Infections. CIRO VALENT SUMAYA ... 374

Interferon Production in Lymphocyte Cultures after Rubella Infection in Humans. ELENA BUIMOVICI-KLEIN, KAREN E. WEISS, and LOUIS Z. COOPER ... 380

Specific Impairment of Cell-Mediated Immunity in Mothers of Infants with Congenital Infection Due to Cytomegalovirus. MAREK ROLA-PLESZCZYNSKI, LAWRENCE D. FRENKEL, DAVID A. FUCCILLO, SALLY A. HENSEN, MONROE M. VINCENT, DAVID W. REYNOLDS, SERGIO STAGNO, and JOSEPH A. BELLANTI ... 386

Vaginal Colonization with Group B *Streptococcus:* A Study in College Women. CAROL J. BAKER, DIANA K. GOROFF, SUSAN ALPERT, VICKI A. CROCKETT, STEPHEN H. ZINNER, JOHN R. EVRARD, BERNARD ROSNER, and WILLIAM M. MCCORMACK 392

Influenza B-Associated Reye's Syndrome: Incidence in Michigan and Potential for Prevention. LAWRENCE COREY, ROBERT J. RUBIN, THEODORE R. THOMPSON, GARY R. NOBLE, EDWARD CASSIDY, MICHAEL A. W. HATTWICK, MICHAEL B. GREGG, and DONALD EDDINS 398

Toxoplasmosis and the Host-Parasite Relationship in Murine Schistosomiasis Mansoni. ADEL A. F. MAHMOUD, G. THOMAS STRICKLAND, and KENNETH S. WARREN 408

Quantitation of Amphotericin B with Use of High-Pressure Liquid Chromatography. INGRID NILSSON-EHLE, THOMAS T. YOSHIKAWA, JOHN E. EDWARDS, MICHAEL C. SCHOTZ, and LUCIEN B. GUZE 414

Dose-Response Relationship after Immunization of Volunteers with a New, Surface-Antigen-Adsorbed Influenza Virus Vaccine. C. W. POTTER, R. JENNINGS, J. P. PHAIR, A. CLARKE, and C. H. STUART-HARRIS 423

Rapid Detection of Antibodies to Cytomegalovirus by Counterimmunoelectrophoresis. JULIE FORTUNATO, BARBARA GOLDSCHMIDT, JOSEPH MENONNA, PETER DOWLING, and STUART COOK 432

Experimental Pneumonia Due to *Pseudomonas aeruginosa* in Leukopenic Dogs: Prolongation of Survival by Combined Treatment with Passive Antibody to *Pseudomonas* and Granulocyte Transfusions. JOHN A. KAZMIEROWSKI, HERBERT Y. REYNOLDS, JEAN C. KAUFFMAN, WILLIAM A. DURBIN, ROBERT G. GRAW, JR., and HENRY B. DEVLIN 438

Effect of Adenine Arabinoside on Epstein-Barr Virus in Vitro. MILLICENT COKER-VANN and RAPHAEL DOLIN 447

Diarrhea Due to *Escherichia coli* in the Rabbit: A Novel Mechanism. J. ROBERT CANTEY and R. K. BLAKE 454

Notes

Immunochemical and Morphological Studies of Hepatitis B Core Antigen Isolated from the Nuclei of Hepatocytes. AGATA BUDKOWSKA 463

Interaction of Adenine Arabinoside and Host Defense Factors in Experimental Infections Due to *Herpesvirus hominis.* C. T. CHO and K. K. FENG 468

Hepatitis B Immune Globulin in Prevention of Hepatitis B among Hospital Staff Members. S. IWARSON, J. AHLMÉN, E. ERIKSSON, S. HERMODSSON, H. KJELLMAN, C. LJUNGGREN, and D. SELANDER 473

Progressive Inhibition of T-Cell Function Preceding Clinical Signs of Cytomegalovirus Infection in Mice. JOHN BOOSS and E. FREDERICK WHEELOCK 478

Enterotoxigenic *Escherichia coli* and Diarrheal Disease in Mexican Children. SAM T. DONTA, ROBERT B. WALLACE, SHANNON C. WHIPP, and JORGE OLARTE 482

Herpes Simplex Virus Types 1 and 2 in Clinical Infections: Differences Observed by Electron Microscopy. STEPHEN K. YOUNG, NATHANIEL H. ROWE, and KAREN C. SANDERLIN 486

Editorial

Swine Influenza and Lungworms. GORDON W. WALLACE 490

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XX. Toxoplasmosis. A. A. F. Mahmoud and K. S. Warren 493

Notices 497

Volume 135 • *March 1977* • *Clindamycin Supplement*

Participants S1

Introduction. Sherwood L. Gorbach S2

In Vitro Susceptibility Testing and Animal Models

Techniques for Anaerobic Susceptibility Testing. Clyde Thornsberry S4

In Vitro Susceptibility of Anaerobes: Comparison of Clindamycin and Other Antimicrobial Agents. Vera L. Sutter S7

Experimental Infections with Anaerobic Bacteria in Mice. T. D. Wilkins, C. B. Walker, D. Nitzan, and A. A. Salyers S13

Therapy for Experimental Intraabdominal Sepsis: Comparison of Four Cephalosporins with Clindamycin Plus Gentamicin. Thomas J. Louie, Andrew B. Onderdonk, Sherwood L. Gorbach, and John G. Bartlett S18

Discussion. Moderator: John A. Washington II S23

Clinical Experience with Clindamycin in Anaerobic Bacterial Infections. I.

Therapy for Infections Due to Anaerobic Bacteria: An Overview. Sydney M. Finegold S25

Comparison of Clindamycin and Chloramphenicol in Treatment of Serious Infections of the Female Genital Tract. William J. Ledger, Carol L. Gee, William P. Lewis, and J. Ronald Bobitt S30

A Double-Blind Comparison of Clindamycin with Penicillin plus Chloramphenicol in Treatment of Septic Abortion. Anthony W. Chow, John R. Marshall, and Lucien B. Guze S35

Clindamycin and Carbenicillin in Treatment of Patients with Intraabdominal and Female Genital Tract Infections. Robert M. Swenson and Bennett Lorber S40

Discussion. Moderator: Philip Mead S46

Clinical Experience with Clindamycin in Anaerobic Bacterial Infections. II.

In Vitro Activity and Clinical Efficacy of Clindamycin in the Treatment of Infections Due to Anaerobic Bacteria. Matthew E. Levison, Jerome Santoro, Jose L. Bran, Kristen Ries, and Walter Rubin S49

Intraabdominal Sepsis: Characterization and Treatment. Ronald Lee Nichols S54

Evaluation of Clindamycin and Other Antibiotics in the Treatment of Anaerobic Bacterial Infections of the Lung. R. Kapila, P. Sen, J. Salaki, and D. B. Louria S58

Clindamycin for Treatment of Sepsis Caused by Decubitus Ulcers. Anthony W. Chow, Jeffrey E. Galpin, and Lucien B. Guze S65

Bacteremia Due to Bacteroidaceae: A Review of 92 Cases. R. G. Mathias, G. K. M. Harding, M. J. Gurwith, H. G. Stiver, E. Sigurdson, C. A. Gratton, and A. R. Ronald S69

Treatment of Mixed Bacterial Infections with Clindamycin and Gentamicin. Robert J. Fass S74

Empiric Treatment with Clindamycin and Gentamicin of Suspected Sepsis Due to Anaerobic and Aerobic Bacteria. John G. Bartlett, Peter V. W. Miao, and Sherwood L. Gorbach .. S80

Discussion. Moderator: Robert Condon S86

Colitis Associated with Clindamycin Therapy

Pseudomembranous Colitis: A Review of Its Diverse Forms. Sherwood L. Gorbach and John G. Bartlett S89

Clindamycin and Colitis: A Review. Francis J. Tedesco S95

Clinical Study of Gastrointestinal Complications Associated with Clindamycin Therapy. John E. Swartzberg, Rosemary M. Maresca, and Jack S. Remington S99

Diarrhea Associated with Clindamycin and Ampicillin Therapy: Preliminary Results of a Cooperative Study. M. J. Gurwith, H. R. Rabin, Kathryn Love, and the Cooperative Antibiotic Diarrhea Study Group S104

Gastrointestinal Side Effects of Clindamycin and Ampicillin Therapy. Rodney H. Lusk, F. Robert Fekety, Jr., Joseph Silva, Jr., Thomas Bodendorfer, Ben J. Devine, Hidenori Kawanishi, Lewis Korff, Diane Nakauchi, Susan Rogers, and Stewart B. Siskin S111

Incidence of Diarrhea and Colitis Associated with Clindamycin Therapy. Harold C. Neu, Alice Prince, Carmen Ortiz Neu, and Glenda J. Garvey S120

Bile Acids, Diarrhea, and Antibiotics: Data, Speculation, and a Unifying Hypothesis. Alan F. Hofmann S126

Discussion. Moderator: Gerald T. Keusch S133

Volume 135 • *April 1977* • *Number 4*

Major Articles

Clinical and Immunologic Evaluation of Neuraminidase-Specific Influenza A Virus Vaccine in Humans. Pearay L. Ogra, Tina Chow, Karl R. Beutner, Elmer Rubi, Joanne Strussenberg, Sharmilla DeMello, and Christine Rizzone 499

Differences in the Growth Requirements of Some Strains of *Ureaplasma urealyticum* of Human Origin. Geoffrey Furness and Marsha Trocola 507

Antigenicity of Cholera Toxoid in Humans. R. Germanier, E. Fürer, S. Varallyay, and T. M. Inderbitzin 512

Concentrations of Levamisole Required for Enhanced Proliferation of Human Lymphocytes and Phagocytosis by Macrophages. Mohamed S. Al-Ibrahim, Robert S. Holzman, and H. Sherwood Lawrence 517

Unexpectedly High Frequency of Antibody to *Mycoplasma pneumoniae* in Human Sera as Measured by Sensitive Techniques. Helmut Brunner, Benjamin Prescott, Harry Greenberg, Walter D. James, Robert L. Horswood, and Robert M. Chanock 524

Colonization of Porcine Small Intestine by *Escherichia coli*: Colonization and Adhesion Factors of Pig Enteropathogens That Lack K88. R. E. Isaacson, B. Nagy, and H. W. Moon 531

Suppressed Response to Interferon Induction in Mice Infected with Encephalomyocarditis Virus, Semliki Forest Virus, Influenza A2 Virus, *Herpesvirus hominis* Type 2, or Murine Cytomegalovirus. DALE A. STRINGFELLOW, EARL R. KERN, DOUGLAS K. KELSEY, and LOWELL A. GLASGOW 540

The Pathogenesis of Shigella Diarrhea. VI. Toxin and Antitoxin in *Shigella flexneri* and *Shigella sonnei* Infections in Humans. GERALD T. KEUSCH and MARY JACEWICZ 552

Genital *Herpesvirus hominis* Infection in Mice. II. Treatment with Phosphonoacetic Acid, Adenine Arabinoside, and Adenine Arabinoside 5'-Monophosphate. EARL R. KERN, JAMES T. RICHARDS, JAMES C. OVERALL, JR., and LOWELL A. GLASGOW 557

Disk Diffusion Susceptibility Testing of *Nocardia* Species. RICHARD J. WALLACE, JR., EDWARD J. SEPTIMUS, DANIEL M. MUSHER, and R. RUSSELL MARTIN 568

Significance of Antibody-Coated Bacteria in Urinary Sediment in Experimental Pyelonephritis. JAMES W. SMITH, STEPHEN R. JONES, and BERTIL KALJSER 577

Temperature-Sensitive Mutants of *Streptococcus pneumoniae*. I. Preparation and Characterization in Vitro of Temperature-Sensitive Mutants of Type I *S. pneumoniae*. CHARLES M. HELMS, MICHAEL B. GRIZZARD, BENJAMIN PRESCOTT, LAWRENCE SENTERFIT, SONIA URMACHER, GERALD SCHIFFMAN, and ROBERT M. CHANOCK 582

Cellular Immune Responses to Herpesviruses during Treatment with Adenine Arabinoside. RUSSELL W. STEELE, RONALD E. KEENEY, JOSEPH BROWN III, and EDWARD J. YOUNG 593

Inactivated Venezuelan Equine Encephalomyelitis Virus Vaccine Complexed with Specific Antibody: Enhanced Primary Immune Response and Altered Pattern of Antibody Class Elicited. WILLIAM E. HOUSTON, ROBERT J. KREMER, CAROLL L. CRABBS, and RICHARD O. SPERTZEL 600

Clinical and Pathogenetic Studies of Medical Lake Macaque Virus Infection in Cynomolgus Monkeys (Simian Varicella). HERBERT A. WENNER, DAVID ABEL, SHLOE BARRICK, and P. SESHUMURTY 611

Virulence-Associated Acquisition of Iron in Mammalian Serum by *Escherichia coli*. IVAN KOCHAN, JAMES T. KVACH, and THOMAS I. WILES 623

Larva-Specific Antibodies in Patients with Visceral Larva Migrans. RAYMOND H. CYPESS, MERYL H. KAROL, JOHN L. ZIDIAN, LAWRENCE T. GLICKMAN, and DAVID GITLIN 633

Notes

Potentiation of Experimental Meningitis Due to *Haemophilus influenzae* by Influenza A Virus. RICHARD H. MICHAELS, RICHARD L. MYEROWITZ, and REBECCA KLAW 641

Possible Endotoxemia in Rabbits after Intravenous Injection of *Staphylococcus aureus* Enterotoxin B. GEORGE W. PETTIT, MICHAEL R. ELWELL, and PETER B. JAHRLING 646

Typhoid Fever in the United States Associated with the 1972–1973 Epidemic in Mexico. WILLIAM B. BAINE, J. J. FARMER III, EUGENE J. GANGAROSA, GEORGE T. HERMANN, CLYDE THORNSBERRY, and PETER A. RICE 649

Sucrose Teepol Tellurite Agar: A New Selective Indicator Medium for Isolation of *Vibrio* Species. BARUN DEB CHATTERJEE, PRADIP KUMAR DE, and TARUN SEN 654

A Longitudinal Study of Varicella-Zoster Virus Infections in Renal Transplant Recipients. JAMES P. LUBY, CARLOS RAMIREZ-RONDA, STEVEN RINNER, ALAN HULL, and PEDRO VERGNE-MARINI 659

Patterns of Rickettsemia and Antibody Response in Silvered Leaf Monkeys (*Presbytis cristatus*) after Inoculation with Virulent and Avirulent Strains of *Rickettsia tsutsugamushi*. DAVID M. ROBINSON, ELSIE GAN, T. C. CHAN, and DAVID L. HUXSOLL 664

Neisseria meningitidis Infections in Northern Norway: An Epidemic in 1974–1975 Due Mainly to Group B Organisms. KJELL BØVRE, EIRIK HOLTEN, HARALD VIK-MO, ANDREAS BRØNDBO, DAG BRATLID, PER BJARK, and PETER JOHAN MOE 669

Second Attacks of Pneumonia Due to *Mycoplasma pneumoniae*. HJORDIS M. FOY, GEORGE E. KENNY, RICHARD SEFI, HANS D. OCHS, and INEZ D. ALLAN 673

Strains of Hong Kong Influenza Virus in Calves. CHARLES H. CAMPBELL, BERNARD C. EASTERDAY, and ROBERT G. WEBSTER 678

Special Article

Some Problems of Modern Influenza Prophylaxis with Live Vaccine. G. P. ZHILOVA, G. I. ALEXANDROVA, M. P. ZYKOV, and A. A. SMORODINTSEV 681

From the Center for Disease Control

Hemodialysis-Associated Hepatitis in the United States, 1974. DAVID R. SNYDMAN, DENNIS BREGMAN, and JOHN A. BRYAN 687

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XXI. Liver, Intestinal, and Lung Flukes. K. S. WARREN and A. A. F. MAHMOUD 692

Volume 135 • *May 1977* • *Number 5*

Major Articles

Formation of Secretory and Circulating Antibodies after Immunization with Live and Inactivated Influenza Virus Vaccines. YA. S. SHVARTSMAN, E. N. AGRANOVSKAYA, and M. P. ZYKOV 697

Virological and Serological Studies of Neurological Complications of Acute Hemorrhagic Conjunctivitis in Thailand. REISAKU KONO, KIKUKO MIYAMURA, ETSUKO TAJIRI, AKIRA SASAGAWA, PRIDA PHUAPRADIT, NARONG ROONGWITHU, ATHASIT VEJJAJIVA, CHUNRUDEE JAYAVASU, PRASSERT THONGCHAROEN, CHANTAPONG WASI, and PRAKIJ RODPRASSERT 706

Cell-Mediated Immune Responses in Humans after Induced Infection with Influenza A Virus. RAPHAEL DOLIN, DOUGLAS D. RICHMAN, BRIAN R. MURPHY, and ANTHONY S. FAUCI 714

Characterization of the Chinese Hamster Ovary Cell Assay for the Enterotoxins of *Vibrio cholerae* and *Escherichia coli* and for Antitoxin: Differential Inhibition by Gangliosides, Specific Antisera, and Toxoid. R. L. GUERRANT and L. L. BRUNTON 720

Pseudomonas Species Bacteremia Caused by Contaminated Normal Human Serum Albumin. ALLEN C. STEERE, JAMES H. TENNEY, DONALD C. MACKEL, MERRILL J. SNYDER, SANDRA POLAKAVETZ, MARY E. DUNNE, and RICHARD E. DIXON 729

Clinical and Laboratory Assessment of the Pathogenicity of Serotyped Enteropathogenic *Escherichia coli*. MARC J. GURWITH, DAVID A. WISEMAN, and PETER CHOW 736

Effect of Immunization on Acute and Latent Infections of Vaginouterine Tissue with Herpes Simplex Virus Types 1 and 2. M. ANTOINETTE WALZ, RICHARD W. PRICE, KOZABURO HAYASHI, BARRETT J. KATZ, and ABNER L. NOTKINS 744

Pathogenesis of Canine Bordetellosis. DAVID A. BEMIS, HELEN A. GREISEN, and MAX J. G. APPEL 753

Immunomodulation of Host Resistance to Experimental Viral Infections in Mice: Effects of *Corynebacterium acnes*, *Corynebacterium parvum*, and Bacille Calmette-Guérin. LOWELL A. GLASGOW, JENNIFER FISCHBACH, SANDY M. BRYANT, and EARL R. KERN 763

Enhancement of Nonspecific Immunity to Bacterial Infection by Cord Factor (6,6′-Trehalose Dimycolate). M. PARANT, F. PARANT, L. CHEDID, J. C. DRAPIER, J. F. PETIT, J. WIETZERBIN, and E. LEDERER ... 771

Immunochemical Analyses of a Major Antigen of *Mycobacterium szulgai*. THOMAS M. DANIEL and RICHARD W. DEMUTH ... 778

Purification and Immunochemical Characterization of the Outer Membrane Complex of *Bacteroides melaninogenicus* Subspecies *asaccharolyticus*. BERNARD J. MANSHEIM and DENNIS L. KASPER ... 787

Slow Virus Infection: Replication and Mechanisms of Persistence of Visna Virus in Sheep. OPENDRA NARAYAN, DIANE E. GRIFFIN, and ARTHUR M. SILVERSTEIN ... 800

Emergence of Resistance to Chloramphenicol in *Salmonella*. CHARLES E. CHERUBIN, HAROLD C. NEU, JAMES J. RAHAL, and LEON D. SABATH ... 807

Protective Effects of Passively Transferred Immune T- or B-Lymphocytes in Mice Infected with *Salmonella typhimurium*. JAMES F. HOCHADEL and KENNETH F. KELLER ... 813

Notes

An Attenuated Influenza Virus Vaccine: Protection against Homologous and Heterologous Strains of Virus. J. D. LEE, R. A. KHAKOO, C. K. STREET, and R. H. WALDMAN ... 824

Pharmacokinetics of Methicillin in Patients with Cystic Fibrosis. SUMNER J. YAFFE, LOUISE M. GERBRACHT, LOUIS L. MOSOVICH, MARY E. MATTAR, MICHELE DANISH, and WILLIAM J. JUSKO 828

Effect of Combinations of Penicillin and Aminoglycosides on *Streptococcus faecalis*: A Comparative Study of Seven Aminoglycoside Antibiotics. E. GUTSCHIK, O. B. JEPSEN, and IDA MORTENSEN ... 832

Infection and Fertilization of Mice after Artificial Insemination with a Mixture of Sperm and Murine Cytomegalovirus. JAMES A. YOUNG, KWOK-SING CHEUNG, and DAVID J. LANG ... 837

Transmission and Activation of Cytomegalovirus with Blood Transfusion: A Mouse Model. KWOK-SING CHEUNG and DAVID J. LANG ... 841

Administration of Human Interferon to Rabies Virus-Infected Monkeys after Exposure. J. HILFENHAUS, E. WEINMANN, M. MAJER, R. BARTH, and O. JAEGER ... 846

Anaerobic Bacteria in Biliary Disease in Elderly Patients. KAORU SHIMADA, TAKASHI INAMATSU, and MORIYA YAMASHIRO ... 850

Special Article

Current Prospects and Problems for a Malaria Vaccine. LOUIS H. MILLER ... 855

From the National Institutes of Health

Summary of the Conference on the Problem of Penicillin-Resistant Gonococci. P. FREDERICK SPARLING, KING K. HOLMES, PAUL J. WIESNER, and MILTON PUZISS ... 865

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XXII. Ascariasis and Toxocariasis. K. S. WARREN and A. A. F. MAHMOUD ... 868

Obituary

Clayton Garr Loosli, 1905–1976. PAUL F. WEHRLE ... 873

Correspondence

Incidence of Transfusion Malaria and Standards for Blood Donor Selection. CARLOS E. LOPEZ and MYRON G. SCHULTZ 875

Notices 877

Erratum (Parkman, P. D., Galasso, G. J., Top, F. H., Jr., and Noble, G. R., 134:100–107) 878

Erratum (Strausbaugh, L. J., Mandaleris, C. D., and Sande, M. A., 135:210–216) 878

Volume 135 • *June 1977* • *Number 6*

Major Articles

Immunity to Gonococcal Infection Induced by Vaccination with Isolated Outer Membranes of *Neisseria gonorrhoeae* in Guinea Pigs. THOMAS M. BUCHANAN and ROBERT J. ARKO 879

Immunity to Experimental Cholera. III. Enhanced Duration of Protection after Sequential Parenteral-Oral Administration of Toxoid to Dogs. NATHANIEL F. PIERCE, R. BRADLEY SACK, and BIMAL K. SIRCAR 888

Ionic Requirements of the DNA Polymerase Associated with Serum Hepatitis B Antigen. SHALOM Z. HIRSCHMAN and ESTHER GARFINKEL 897

Pathogenesis of Infection with *Rickettsia rickettsii* in the Dog: A Disease Model for Rocky Mountain Spotted Fever. K. P. KEENAN, W. C. BUHLES, JR., D. L. HUXSOLL, R. G. WILLIAMS, P. K. HILDEBRANDT, J. M. CAMPBELL, and E. H. STEPHENSON 911

Synergistic Infection with Murine Cytomegalovirus and *Candida albicans* in Mice. JOHN R. HAMILTON, JAMES C. OVERALL, JR., and LOWELL A. GLASGOW 918

Maternal-Fetal Pharmacological Activity of Amikacin. BETTY BERNARD, MICHAELINE ABATE, PAUL F. THIELEN, HAZEM ATTAR, CHARLES A. BALLARD, and PAUL F. WEHRLE 925

Fecal Excretion of Hepatitis A Virus in Humans. JORGE RAKELA and JAMES W. MOSLEY 933

Treatment of Gonorrhea with Trimethoprim-Sulfamethoxazole. W. C. ELLIOTT, G. REYNOLDS, C. THORNSBERRY, D. S. KELLOGG, H. W. JAFFE, S. T. BROWN, J. ARMSTRONG, and M. F. REIN 939

Notes

Diagnosis of Experimental Encephalitozoonosis in Rabbits by Complement Fixation. N. JONATHAN WOSU, RICHARD OLSEN, JOHN A. SHADDUCK, A. KOESTNER, and STEVEN P. PAKES 944

Human Toxic Neutrophils. IV. Incorporation of Amino Acids and Uptake of 2-Deoxy-D-Glucose. SALAH S. BIBI, LARRY R. DECHATELET, and CHARLES E. MCCALL 949

Pharmacologic Factors Associated with Gentamicin Nephrotoxicity in Rabbits. PETER T. FRAME, JOHN P. PHAIR, CHATRCHAI WATANAKUNAKORN, and THOMAS W. P. BANNISTER 952

Penetration of Tobramycin into Infected Extravascular Fluids and Its Therapeutic Effectiveness. WENDELL H. HALL, DALE N. GERDING, and ELIZABETH A. SCHIERL 957

Inhibition of Simian Virus 40-Induced Tumors by Antisera to Fetal Hamster Tissue. LAURENCE E. BECKER, OPENDRA NARAYAN, and RICHARD T. JOHNSON 962

Detection by Immunofluorescence of Common Antigenic Determinants in Unrelated Gram-Negative Bacteria and Their Lipopolysaccharides. M. ESKENAZY, G. KONSTANTINOV, R. IVANOVA, and D. STRAHILOV 965

Antifungal Activity of 5-Fluorocytosine as Measured by Disk Diffusion Susceptibility Testing. CHRISTOPHER J. UTZ and SMITH SHADOMY 970

Determination of Neutralizing Antibody and IgG Antibody to Varicella-Zoster Virus and of IgG Antibody to Membrane Antigens by the Immunoperoxidase Technique. GIUSEPPE GERNA, GIORGIO ACHILLI, and ROBERT W. CHAMBERS ... 975

Correlation of e Antigen, DNA Polymerase Activity, and Dane Particles in Chronic Benign and Chronic Active Type B Hepatitis Infections. MYRON J. TONG, DOUGLAS STEVENSON, and IRVING GORDON ... 980

Studies of the Coagulation and Complement Systems during Experimental Rocky Mountain Spotted Fever in Rhesus Monkeys. DEANE F. MOSHER, DOUGLAS P. FINE, JAMES B. MOE, RICHARD H. KENYON, and GERRY L. RUCH ... 985

Enhancement of Murine Cytomegalovirus Infection during Graft-vs.-Host Reaction. JOHN N. DOWLING, BRIAN C. WU, JOHN A. ARMSTRONG, and MONTO HO ... 990

Lesions in Guinea Pigs Infected with *Coxiella burnetii* Strain M-44. J. W. JOHNSON, C. G. MCLEOD, J. L. STOOKEY, G. A. HIGBEE, and C. E. PEDERSEN, JR. ... 995

Comparison of Concentrations of Amoxicillin and Ampicillin in Serum and Middle Ear Fluid of Children with Chronic Otitis Media. JOSEPH J. KLIMEK, CHARLES NIGHTINGALE, WILLIAM B. LEHMANN, and RICHARD QUINTILIANI ... 999

Isolation of Enteric Pathogens from Asymptomatic Students from the United States and Latin America. LARRY K. PICKERING, HERBERT L. DUPONT, DOLORES G. EVANS, DOYLE J. EVANS, JR., and JORGE OLARTE ... 1003

Antibodies to Hepatitis B Core Antigen in Hepatitis B Surface Antigen-Positive and -Negative Chronic Hepatitis. MICHAEL A. GERBER, TERESA ZAPPI, SALVATORE J. VERNACE, and FIORENZO PARONETTO ... 1006

Immune Adherence Hemagglutination: Further Observations on Demonstration of Antibody to Varicella-Zoster Virus. ZANE G. KALTER, SHARON STEINBERG, and ANNE A. GERSHON ... 1010

From the Center for Disease Control

St. Louis Encephalitis in the United States, 1975. WALTON B. CREECH ... 1014

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XXIII. Typhoid Fever. T. BUTLER, A. A. F. MAHMOUD, and K. S. WARREN ... 1017

Reviewers for Volume 135 ... 1021

Index to Volume 135 ... 1023

Index to Volume 136

Author Index

Aach, R. D., 117
Abate, M., 377
Abe, K., 571
Abernathy, C. O., 583
Abrams, G. D., 17
Ahlstedt, S., S144
Albrandt, K., 649
Alexiou, D., 428
Allen, A. M., 31
Allen, R. C., 510
Allen, R. G., 31
Allred, E. N., 805
Alpert, S., 271, 740
Anderka, M., 271
Anderson, P., S57, S63
Anken, M., S318
Apollo, E., 697
Archer, G., 327
Arko, R. J., S132
Arnesen, K., 229
Arnon, S. S., 829
Aronson, M., 100
Artenstein, M. S. (deceased), 176
Audibert, F., S246
Austrian, R., S38
Baer, G. M., 286, 336
Bailey, G. D., S304
Baker, C. J., 137, S98
Baker, P. J., S20
Ballard, C. A., 377
Bannatyne, R. M., 469
Barile, M. F., S220
Barker, L. F., 541
Barnes, A. M., 489
Barnes, M. W., 400
Baron, S., 50, 122, 286
Bartlett, A., S274
Bartlett, J. G., 82, 271, 701, 789
Bartlett, M. L., S258
Barton, L., 377
Baseman, J. B., 308, 768, S196
Baughn, R. E., 360
Baxby, D., 453
Beckers, P. J. A., 43
Beckett, K. M., 263
Behme, R. J., 597
Belshe, R. B., 256
Bennett, J. V., S151
Berens, R. L., 724
Bernard, B., 377
Bertram, M. A., 734
Betts, R. F., 746
Bhattacharjee, A. K., S78
Bidwell, D. E., S274
Biggar, W. D., 469
Bisno, A. L., 278
Bjorvatn, B., 216
Black, P. H., 667
Black, R. E., 829
Blacklow, N. R., 256, 383
Blake, R. K., 640
Blayo, M.-C., 321
Boyce, J. M., 489
Braude, A. I., 633, S167
Brolnitsky, O., 458
Brooks, S. J. D., 633
Broud, D. D., 176
Brown, A., 7
Bruins, S. C., S161
Buchanan, T. M., S132
Buhles, W. C., Jr., 90
Bullock, S. L., S279
Bundle, D. R., S78
Burke, D. S., 354
Butler, T., 317, 465
Cacciatore, L., 475
Cannon, H. G., 31
Cantey, J. R., 640
Caplan, E., 256
Cappel, R., 617
Carpenter, C. C. J., Jr., 461
Carruthers, M., 588
Casey, J. I., 495
Castellano, G. A., S337
Cerini, R., 475
Chanock, R. M., 256, S208
Chapel, T. A., 810
Chaperas, S. D., S252
Chedid, L., S246
Cherry, J. D., 109
Chester, T. J., 104
Christie, E., 432
Cisneros, R. L., 82, 701
Clark, L. C., 17
Cleary, W. F., 336
Clinard, E. H., S258
Collier, A. M., 444, 768, S196
Conklin, R., 383
Craft, F. O., 75
Craven, D. E., S161, S204
Crockett, V. A., 740
Cross, J. H., 383
Cross, S. S., S20
Dal Canto, M. C., 59
Davenport, F. M., 17
Davies, J. A., S204
De Cuyper, F., 617
De Marco, F., 475
Denning, C. R., 623
Denson, L. J., 623
De Ritis, F., 475
Díaz, A. M., 336
Docherty, J. J., S286
Donham, K. J., 132
Dorsett, P. H., S300
Douglas, H., S167
Douglas, R. G., Jr., 746
Drude, E., 271
Drutz, D. J., 37
Dubey, J. P., 432
Duncan, C. L., 661
DuPont, H. L., 383, 577, 693, 717, S118
Echeverria, P., 383
Edelman, R., 354
Egan, W., S71
Engert, R. F., 205
Ennis, F. A., 623, 706
Ericsson, C. D., 693
Espana, C., 593
Evans, B. A., 248
Evans, D. G., 693, S118
Evans, D. J., Jr., 693, S118
Evrard, J. R., 740
Falk, B., 801
Fasth, A., S144
Fekety, F. R., Jr., 327
Finegold, S. M., 822
Finland, M., 400
Fischetti, V. A., S222
Fisher, M. W., S181
Flatauer, S., 1
Fletcher, J., 322
Flournoy, N., 754
Formal, S. B., 416, 577, S130
Fox, M. D., 312
Frasch, C. E., S84
Fraser, A. S., S304
Fraser, D. W., 104
Fudenberg, H. H., 436
Gaerlan, P. F., 623
Gangarosa, E. J., 153, 458, 605
Ganguly, R., 171
Gatewood, C., 810
Gehle, W. D., S329
Gelb, L. D., 117
Gelston, A. L., 815
George, W. L., 822
Gemski, P., Jr., 577
Gerding, D. N., 778
Gerety, R. J., 541
Giebink, G. S., S191
Gilman, R. H., 717
Gilman, S. C., S286
Glode, L. M., S239
Glode, M. P., S93, S186

Glogau, R., 689
Gold, R., S31
Goldings, E., S14
Goldschneider, I., S31
Goldstein, C., 271
Gorbach, S. L., 601
Gotschlich, E. C., S31, S71, S93, S150, S222
Gotoff, S. P., 649
Grady, G. F., 416
Granoff, D. M., 292
Gravell, M., S300
Gribble, D. H., 593
Griffiss, J. M., 176, 733
Grizzard, M. B., S208
Grove, D. I., 562
Grunert, R. R., 297
Guggenheim, M. A., 50
Gupta, S., 510
Gurwith, M. J., 239
Gutenson, O., S300
Gwaltney, J. M., Jr., S204
Hadas, H., 100
Halbert, S. P., S318
Hall, W. H., 778
Hamburger, J., 562
Hamory, B. H., S204
Hanna, L., 689
Hanson, L. A., 346, S93, S144
Harding, G. E., 439
Harnett, N. M., 469
Harper, T. B. III, 510
Hattori, A., 784
Hayes, C. H., 740
Hayes, M. E., 75
Hazzard, G. T., S337
Hecter, B. J., 495
Helms, C. M., S208
Hendley, J. O., 109, S204
Hennessy, A. V., 17
Hewlett, E. L., S216
Hirsch, M. S., 667
Ho, M. T., 383
Hoffmann, C. E., 297
Holder, I. A., 555
Holmberg, C. A., 593
Holmgren, J., S105
Hook, E. W., 303
Hopkins, D. R., 548, 805
Horger, E. O. III, 436
Hornick, R. B., 577, 717
Horwitz, M. A., 153
Howie, V. M., S57
Howley, P. M., 593
Hu, S.-C., 444
Hughes, J. M., 153
Ihara, T., 784
Imai, M., 571
Ingram, D. L., S57
Irwin, G. R., 31
Isaacson, R. E., S124
Iwasa, T., 784
Izawa, T., 784
Jackson, G. G., 301, 531
Jacobson, J. A., 104
Jaffe, H. W., 684
Jawetz, E., 689
Jennings, H. J., S78
Jodal, U., S144
Johns, M., S161
Johnson, T. C., 59
Jonasson, O., 531
Jones, T. C., 813
Jorgensen, J. H., 422
Jousimies, H., S43
Juranek, D. D., 712
Kabat, E. A., S13, S36
Kacaki, J., S311
Kaijser, B., 346, S93, S144
Kamiya, H., 784
Karasawa, T., 571
Kaspar, R. L., 37
Kasper, D. L., 75, 82, 701, 789, S98
Kaufman, A. F., 312
Käyhty, H., S43
Kazmierczak, A., 482
Keane, M. B., 810
Kenny, C. P., S78
Kernbaum, S., 321
Keusch, G. T., 456
Kim, B., 216
Klipstein, F. A., 205
Klyshevich, K. A., 495
Kohler, R., 112
Koistinen, J., 436
Kramer, M. S., 801
Krause, R. M., S8
Kretschmer, R. R., 649
Kronvall, G., 216
Kuijpers, L. P. C., S311
Kyong, C. U., 436
Ladra, K. M., 96
Lampert, P. W., 391
Larsson, P., S144
Lee, J. C., 422
Lee, K.-Y., 469
Lehrer, R. I., 96
Leinikki, P. O., S294
Leininger, J. R., 132
Lepow, M. L., S31
Lerner, K. G., 754
Leung, Y.-W., 679
Leuwenberg, A. D. E. M., 43
Levin, M. J., 263
Levine, J., 801
Levine, M. M., 256, 577, 717
Levine, P. H., S324
Levy, H. B., 122, 286
Lew, M. A., 263
Ley, A. C., S300
Libonati, J. P., 717
Lidin-Janson, G., 346
Lincoln, K., 346
Lindberg, U., 346, S144
Little, J. W. III, 746
Liu, T.-Y., S71
Lyons, J. M., 633
Maassab, H. F., 17
Madden, D. L., S337
Mahmoud, A. A. F., 160, 317, 461, 465
Mäkelä, P. H., S43
Mancini, C., 597
Manclark, C. R., S216
Mäntyjärvi, R. A., 444
Marly, J. L., 482
Marr, J. J., 724
Marr, J. S., 458
Martin, A., S78
Martin, S. M., S151
Mathur, S., 436
Matsuyama, T., 609
Mattson, J. M., S324
Mayhall, C. G., 697
Mayumi, M., 571
McCabe, W. R., S161
McCarty, M., S253
McCormack, W. M., 271, 740
McCracken, G. H., S93
McCutchan, J. A., S167
McDonel, J. L., 661
McIver, J., 416
McLarsen, L. C., 216
Medalia, O., 100
Mehta, P. D., 229
Mergenhagen, S. E., S239
Merson, M. H., 153
Meuwissen, J. H. E. Th., 43
Meyer, R. D., 449
Michaels, R. H., 222
Milligan, W. H. III, 117
Minuse, E., 17
Minuth, J. N., 360
Miranda, Q. R., S304
Mitchell, J. R., 17
Mond, J., S14
Moon, H. W., S124
Moore, S. A., 286
Moritsugu, Y., 571
Morse, H. C. III, S20
Morse, S. I., S234
Mosier, D. E., S14
Mostow, S. R., 1
Moxon, E. R., S186
Murphy, B. R., 1, 256
Muse, K. E., 768
Musher, D. M., 360
Nagy, B., S124
Nankervis, G. A., 292
Naraqi, S., 531
Neiman, P. E., 754

Nevin, T., 649
Nevot, P. A., 482
Norden, C. W., 222
Oda, T., 571
O'Hanley, P. D., 640
Oldstone, M. B. A., 391
Olling, S., 346, S144
Olson, J. G., 383
Onderdonk, A. B., 82, 271, 701, 789
Osburn, B. I., 593
Oxman, M. N., 519
Pagano, J. S., 444
Paler, M., 1
Pannier, W. L., 122
Papadatos, C., 428
Papaevangelou, G., 428
Pappas, P. W., 432
Paramasivan, C. N., 796
Parke, J. C., Jr., S51
Parrino, T. A., 256
Passila, S., S294
Paul, W. E., S14
Pavan, P. R., 706
Pearce, I. A., 278
Pearce, W. A., S132
Pearson, H. A., S25
Peltola, H., S43
Pennington, J. E., 127
Perillo, R. P., 117
Perl, D. F., 336
Peterson, L. P., S196
Peterson, L. R., 778
Peterson, P. K., 502
Pettay, O., S43
Philippon, A. M., 482
Philipson, A., 370
Pickering, L. K., 693
Pierce, N. F., S113
Plommet, M. G., 482
Poland, J. D., 489
Politou, E., 428
Polk, B. F., 75
Pollard, R. A., 458
Portnoy, B., 383
Powell, K. R., 109
Prescott, B., S20
Putnak, J. R., 31
Quie, P. G., 502, S191
Quinnan, G., 383
Rabinowitz, S. G., 59
Raja, R., 801
Ramsburg, H. H., 354
Rawal, B. D., 679
Ray, G., 754
Reed, M. A., 510
Reeves, W., 754
Reinap, B. G., 75
Reller, L. B., 187, 196
Renkonen, O.-V., S43
Reynolds, G. H., 684
Richman, D. D., 256
Rinaldo, C. R., Jr., 667
Robbins, J. B., S51, S71, S91, S93, S186
Rose, F. B., 256
Rosenbaum, J. L., 801
Rosenberg, M. L., 458
Rosenstreich, D. L., S239
Rosner, B., 704
Roth, F. K., 746
Roumeliotou, A., 428
Ruitenberg, E. J., S267
Ruoslahti, E., S43
Rusten, H. M., 256
Ryder, R. W., 605
Sack, R. B., S113
Saelinger, C. B., 555
Sakurai, M., 784
Sale, G. E., 754
Sammons, M. L., 122
Sanders, W. M., S258
Saunders, G. C., S258
Schantz, P. M., 712
Scher, I., S14
Schiffman, D., 623
Schlesselman, J. J., S51
Schluter, B., 7
Schmeling, D., 502
Schneerson, R., S51
Schoolnik, G. K., S132
Schultz, M. G., 712
Schuurs, A. H. W. M., S311
Segal, H. G., 31
Selgrade, M. K., 444
Sever, J. L., S257, S337
Shaddock, J. H., 286
Shadomy, S., 697
Shanmugasundaram, N., 796
Shifrine, M., 90
Shikata, T., 571
Shorr, R., 109
Short, H. B., 205
Sieben, M., 43
Sigurdson, S., 655
Silver, C. A., 176
Silvian, I., 26
Siviglia, G., S222
Sivonen, A., S43
Smith, D. W., 439
Smith, I. C. P., S78
Smith, K. O., S329
Smith, P., S57, S63
Snell, K., 555
Snyder, M. J., 577, 717
Sohl-Akerlund, A., S144
Spencer, J. C., 171
Spertzel, R. O., 122
Stamm, W. E., S151
Stashak, P. W., S20
Steele, R. H., 510
Stephen, E. L., 122
Stevens, P., S174
Stewardson-Krieger, P. B., 649
Stjernholm, R. L., 510
Stollerman, G. H., 278
Stratton, C. W., 187, 196
Subramanian, S., 796
Sutter, V. L., 822
Sutton, A., S93, S186
Suzuki, H., 571
Svanborg-Edén, C., S144
Svennerholm, A.-M., S105
Swanson, J., S138
Tabor, E., 541
Takahashi, M., 784
Takemoto, K. K., 593
Tauber, I., 43
Tempest, B., 489
Templeton, G. B., 360
Tenoso, H. J., S304
Thomas, E. D., 754
Thormar, H., 229
Thorne, G. M., 601
Thornsberry, C., 684
Top, F. H., Jr., 31
Toshach, S., 655
Tung, K. S. K., 216
Utili, R., 583
Uzawa, T., 571
Valentine, A., 655
Van Beers, D., 617
van Knapen, F., S267
Verhoef, J., 502
Virella, G., 436
Voller, A., S274
von Reyn, C. F., 489
Vosdingh, R., 7
Waldman, R. H., 171
Wallace, M., 458
Wallen, W. C., S324
Walls, K. W., S279
Waner, J. L., 805
Waring, W. W., 510
Warren, K. S., 160, 317, 461, 465, 562
Weber, N. S., 489
Wedel, H., 346
Wehrle, P. F., S57
Weller, T. H., 805
Wellinghoff, W., 117
Wells, J. G., 605
Welsh, R. M., 391
Wenzel, R. P., S204
White, A., 112
Wiesner, P. J., 684
Wilkins, J., S57
Williams, R. C., Jr., 216
Williams, T. W., 239
Wise, T. G., 706
Wolff, J., S216
Wolters, G., S311
Woodward, W. E., 577, 717

Yager, P. A., 286
Yamada, A., 784
Yamashiroya, H. M., 531
Yodfat, Y., 26
Young, L. S., S174
Zabriskie, J. B., S222
Zaia, J. A., 519
Zaidi, A. A., 684
Zaldivar, N. M., S14
Zalma, V., 489
Ziegler, E. J., S167
Zimmerman, H. J., 583
Zinneman, H. H., 778
Zinner, S. H., 740

Subject Index

Adenine, metabolism, relation to antileishmanial effect of allopurinol, 724
Adenyl cyclase, in *B. pertussis* vaccines, S216
Adherence, of Kanagawa-positive *V. parahaemolyticus* to epithelial cells, 588
Adjuvant
  activity of lipopolysaccharides of gram-negative bacteria and water-soluble products of mycobacteria, S246
  protection against bacterial infection in granulocytopenic mice, 90
Allopurinol, antileishmanial effect, relation to adenine metabolism, 724
Amantadine•HCl
  prospects for use in prophylaxis against influenza A, 301
  sensitivity of influenza A/New Jersey/8/76 (HswlNl) virus, 297
Amikacin, resistance of clinical isolates of gram-negative bacilli, 449
Amino acids, free, in plasma during experimental infection of mice with MHV-3 strains mouse hepatitis virus, 475
Amoxicillin, compared with ampicillin in middle ear fluid and serum of children with otitis media (erratum), 325
Ampicillin
  compared with amoxicillin in middle ear fluid and serum of children with otitis media (erratum), 325
  pharmacokinetics during pregnancy, 370
Anaerobic bacteria, in vitro activity of orally absorbed cephalosporins, 697
Anemia, sickle cell, and severe bacterial infections, S25
Antibiotic resistance
  see also specific drug
  and R factor incidence, in clinical isolates of *Salmonella* in India (1975–1976), 796
  multiple, transfer from *B. fragilis* to *E. coli* K12, 597
  of *N. gonorrhoeae* isolated from humans, trends and seasonality, 684
Antibiotic therapy, effect on concentration of glucose and inorganic elements in saliva, 321
Antibiotic-induced diarrhea, evidence for bacterial etiology, 822
Antibiotics
  see also specific drug
  binding to proteins, quantitative determination by preparative ultracentrifuge, 778
Antibodies
  IgG and IgM, to capsid antigen of Epstein-Barr virus, diagnostic value in infectious mononucleosis, 428
  to *C. albicans*, in IgA-deficient humans, 436
Antibody
  see also specific microorganism
  formation in newborn mouse, T-cell-independent response, S14
  humoral and secretory to cytomegalovirus, correlation with cervical excretion of the virus, 805
  to cell wall glycolipid of gram-negative bacteria, induction of immunity to bacteremia and endotoxemia, S167
  to varicella-zoster virus-induced membrane antigen, detection by immunofluorescence assay using monodisperse, glutaraldehyde-fixed, infected target cells, 519
Antibody response, quantitative, to capsular polysaccharide of *B. fragilis* in an animal model of intraabdominal abscess formation, 789
Antigen, capsular, of *H. influenzae* type b, kinetics in infected infant rats, 292
Antigens, cross-reactive, potential for immunization-induced immunity to gram-negative bacteria, S161
Antitoxin, *S. dysenteriae* type 1, after immunization, failure of high levels to prevent disease in rhesus monkeys, 416
Artenstein, M. S. (memorial), S7
Assay
  in human serum, of clindamycin alone and in the presence of aminoglycoside antibiotics, 422
  of bactericidal activity by the serum dilution test
    selection of a physiologic and practical diluent, 187
    standardization and correlation with antimicrobial assays and susceptibility tests, 196
Bacille Calmette-Guérin
  influence of vaccination on hematogenous dissemination of virulent *M. tuberculosis* to lungs of guinea pigs, 439
  nonspecific protection of mice against influenza virus infection by local or systemic immunization, 171
Bacilli, gram-negative
  antibody to cell wall glycolipid, and immunity to bacteremia and endotoxemia, S167
  cross-protective immunity induced by core glycolipid of *S. minnesota* and antigens of *S. pneumoniae*, S174
  epidemiology of nosocomial infections, and development and use of vaccines, S151
  immunization-induced immunity and antibody to cell wall glycolipid of gram-negative bacteria, S167
Bacteriology, quantitative, of vaginal flora of normal women, and at various times during menstrual cycle, 271
Bacteriophage typing, of *C. diphtheriae* from Canada, 655
Bacteriuria, comparison of isolates of *E. coli* with those from feces of healthy schoolchildren, 346
Bacteroides fragilis
  capsular polysaccharide as a virulence factor, comparison of pathogenic potential of encapsulated and unencapsulated strains, 82
  isolation and identification of encapsulated strains, 75
  quantitative antibody response to capsular polysaccharide in animal model of intraabdominal abscess formation, 789
  transfer of multiple antibiotic resistance to *E. coli* K12, 597
Bismuth subsalicylate, inhibition of activity of crude *E. coli* and *V. cholerae* toxins in intestinal loops, 693
Bone marrow grafts, allogeneic, interstitial pneumonia and opportunistic viral infection in recipients, 754

Bordetella pertussis
adenyl cyclase in vaccines, S216
lymphocyte-promoting factor, isolation and properties, S234
pathogenesis of infection in hamster tracheal organ culture, S196
resistance of phase I to mucociliary clearance by rabbit tracheal mucous membrane, 609
scanning electron microscopic study of infected hamster tracheal organ culture, 768
Botulism
food-borne in the U.S., 1970–1975, 153
in the U.S., 1976, 829
Bronchoalveolar cells, quantitative effects of immunosuppression, 127
Brucella abortus
detection in sera of cattle by the enzyme-linked immunosorbent assay, S258
experimental infection in guinea pigs, and *B. melitensis* infection in mice, treatment with rifampin, 482
Brucella melitensis, experimental infection in mice, and experimental *B. abortus* infection in guinea pigs, treatment with rifampin, 482
Brucellosis, incidence in the U.S., 1965–1974, 312
Burn sites, in infected mice, production of exotoxin by *P. aeruginosa*, 555
Candida albicans
antibodies, in IgA-deficient humans, 436
in vitro activity of four tetracycline analogues in combination with amphotericin B, 263
Carbenicillin, and gentamicin, synergy in treatment of experimental endocarditis due to *P. aeruginosa* in rabbits, 327
Cefazolin, maternal-fetal transfer in first 20 weeks of pregnancy, 377
Cell wall, of *P. aeruginosa*, in vitro effect of tetracaine hydrochloride, 679
Cephalosporins, orally absorbed, in vitro activity against anaerobic bacteria, 697
Cephalothin, clearance from canine plasma by hemoperfusion, 801
Chemiluminescent responses, of polymorphonuclear leukocytes of subjects with atypical chronic granulomatous disease, correlation with metabolic responses, 510
Cholera
diagnosis and management, 461
mechanisms of disease and immunity, S105
Cholera toxoid, immune response of intestinal mucosa of dogs, S113
Cholestasis, induced by endotoxin of *E. coli* and *S. enteritidis*, inhibition of Na^+, K^+-adenosinetriphosphatase as possible mechanism, 583
Chronic granulomatous disease, atypical, correlation of metabolic and chemiluminescent responses of polymorphonuclear leukocytes, 510
Cilia, of rabbit trachea mucous membrane, inability to clear *B. pertussis* phase I, 609
Clindamycin
alone and in the presence of aminoglycosides, rapid bioassay, 422
clearance from canine plasma by hemoperfusion, 801
Clindamycin-associated colitis
due to toxin-producing *Clostridium* species in hamsters, 701
review, and evidence for *C. difficile* as etiologic agent, 822
Clostridium, toxin-producing, causing clindamycin-associated colitis in hamster, 701
Clostridium botulinum, toxin and disease, incidence in the U.S., 153, 829
Clostridium difficile, probable etiologic agent in clindamycin-associated colitis, and review of this disease, 822
Clostridium perfringens, type A enterotoxin, regional determination of activity in the rabbit intestine, 661
Coliform bacteria, from the gastrointestinal tract or urine cultures, relative enterotoxigenicity, 205
Colitis, clindamycin-associated, due to toxin-producing *Clostridium* species in hamsters, 701
Complement, Clq deviation test, compared with Raji cell test in detection of circulating immune complexes in patients with leprosy, 216
Complement fixation, microtest, detection of viral antibodies, comparison with enzyme-linked immunosorbent assay, S286, S294, S324
Corynebacterium diphtheriae, from Canada, bacteriophage typing, 655
Corynebacterium vaginale, vaginal colonization of women, 740
Counterimmunoelectrophoresis, insensitivity in early diagnosis of *H. influenzae* type b infection in rats, 292
Cryptococcus neoformans, killing by fungicidal components of mammalian granulocytes, 96
Cytomegalovirus
cervical excretion, correlation with humoral and secretory antibody, 805
detection of antibodies by enzyme-linked immunosorbent assay, comparison with indirect hemagglutination, S337
interaction with leukocytes from patients with mononucleosis due to cytomegalovirus, 667
murine, infection of epithelial cells in mouse tracheal ring organ culture, 444
Defective-interfering lymphocytic choriomeningitis virus, prevention of virus-induced cerebellar disease in rats, 391
Diabetes, and impaired response of lymphocytes to *S. aureus* antigen in humans, 495
Diarrhea
antibiotic-associated, review, and evidence for bacterial etiologic agents, 822
due to invasive *E. coli* in rabbits, 640
in children
in Manitoba, two-year study of gastroenteritis, 239
in Mexico, due to enterotoxigenic *E. coli*, S118
in Taiwan, relative importance of viruses and bacteria in etiology, 383
DNA polymerase and its inhibitors, and hepatitis B e antigen and antibody, relations in patients with acute and chronic hepatitis, 617
Electron microscopy, of the squamocolumnar junction of

the cervix of patients with gonorrhea, 248
Encephalitis, in ferrets, caused by nonproductive strain D.R. measles virus isolated from a patient with subacute sclerosing panencephalitis, 229
Endocarditis, experimental
due to *N. gonorrhoeae* in rabbits, hepatitis and perihepatitis as complications, 37
due to *P. aeruginosa* in rabbits, synergy of carbenicillin and gentamicin in therapy, 327
Endotoxin
action on lymphoid cells, S239
inhibition of effects on neutrophils by polymyxin B sulfate, 469
of *E. coli* and *S. enteritidis*, inhibition of Na^+, K^+-adenosinetriphosphatase as mechanism for endotoxin-induced cholestasis, 583
Enterobacter cloacae, from the gastrointestinal tract or urine cultures, relative enterotoxigenicity, 205
Enterotoxigenicity, of *E. cloacae*, *K. pneumoniae*, and *E. coli*, from the gastrointestinal tract or urine cultures, 205
Enterotoxin, of *C. perfringens* type A, regional determination of activity in the rabbit intestine, 661
Enzyme-linked immunosorbent assay, S237–S340
and solid-phase radioimmunoassays, magnetic transfer devices, S329
detection and surveillance of animal diseases, S258
detection of cytomegalovirus antibody in human serum, comparison with indirect hemagglutination, S337
detection of Epstein-Barr virus soluble antigen, comparison with micro-complement-fixation test, S324
detection of hepatitis B surface antigen in human sera, comparison with reversed hemagglutination and radioimmunoassay, S311
detection of hepatitis B surface antigen with use of alkaline phosphatase-labeled antibody, comparison with radioimmunoassay, S318
detection of herpes simplex virus antibody, comparison with micro-complement-fixation test, S286
detection of herpes simplex virus type 1 in clinical samples, comparison with tissue culture isolation, S304
detection of parasitic infections, S267
detection of rubella antibodies in human sera, comparison with hemagglutination inhibition, S300
detection of viral diseases, comparison with hemagglutination inhibition, S274
examination of parameters for standardization, S279
quantitative, semiautomated, for detection of viral antibodies, comparison with complement fixation and hemagglutination inhibition tests, S294
Epidemic, of serogroup B *N. meningitidis* disease in Alabama, prophylaxis with a sulfonamide, 104
Epidemiology
see also specific disease
of acute bacterial meningitis at Boston City Hospital during 12 years between 1935 and 1972, 400
of an outbreak of bubonic plague in New Mexico, 489
of botulism in the U.S., 153, 829
of brucellosis in the U.S., 1965–1974, 312
of nosocomial infections due to gram-negative bacilli, and development and use of vaccines, S151
of pharyngeal carriage of *H. influenzae* type b in families with a child with meningitis or epiglottitis, 222
of shigellosis, in the U.S., 1975, 458
of travelers' diarrhea in foreign visitors to the U.S., 605
of trichinosis in the U.S., 1975, 712
of typhus fever in New York City in 1847, 813
of yaws in the Americas, 1950–1975, 548
Epstein-Barr virus
detection of soluble antigen by enzyme-linked immunosorbent assay, comparison with micro-complement-fixation, S324
diagnostic value of IgG and IgM antibodies to capsid antigen in infectious mononucleosis, 428
Escherichia coli
and *P. mirabilis*, differential susceptibility to mouse urine and urea, 100
antigens, human immune response, and pathogenesis of urinary tract infection, S144
bearing *S. flexneri* 2a surface antigens, as oral attenuated vaccine against shigellosis, 577
comparison between isolates from bacteriuric patients and those from feces of healthy schoolchildren, 346
enterotoxigenic
ultrastructural observations on adherence to ileal epithelium of the pig, S124
virulence factors, S118
from the gastrointestinal tract or urine cultures, relative enterotoxigenicity, 205
invasive, causing diarrhea in rabbits, 640
kinetics of phagocytosis by human polymorphonuclear leukocytes and monocytes, 502
meningitis in infant rat model, S186
relative importance in the etiology of pediatric diarrhea in Taiwan, 383
strain Bos-12, and *N. meningitidis*, sialic acid-containing polysaccharides, structure and immunology, S71
Escherichia coli K1, cause of neonatal meningitis, S93
Escherichia coli K12, transfer of multiple antibiotic resistance from *B. fragilis*, 597
Escherichia coli O6, formalin-treated vaccine for prevention of retrograde pyelonephritis in rats, 633
Escherichia coli toxin, and *V. cholerae* toxin, inhibition of activity in intestinal loops by bismuth subsalicylate, 693
Exotoxin, production by *P. aeruginosa* in burned skin of mice, 555
Fungicidal activity, of mammalian granulocytes against *C. neoformans*, 96
Gastroenteritis, in children
relative importance of viruses and bacteria in etiology, 383
two-year study of etiology, 239
Genital virus infection, accompanied by herpetic whitlow, 689
Gentamicin
and carbenicillin, synergy in treatment of experimental endocarditis due to *P. aeruginosa* in rabbits, 327
clearance from canine plasma by hemoperfusion, 801
emergence of variant *S. aureus* after in vitro exposure,

and infectivity of variants in animals, 360
Glucose, in saliva, effect of antibiotic therapy, 321
Glycolipid
cell wall, of gram-negative bacteria, induction of immunity to bacteremia and endotoxemia, S167
core, of *S. minnesota*, and antigens of *S. pneumoniae*, and cross-protective immunity to gram-negative bacilli, S174
Gonorrhea, electron microscopy of the squamocolumnar junction of the cervix of patients, 248
Granulocytes, mammalian, fungicidal components active against *C. neoformans*, 96
Haemophilus influenzae type b
and *N. meningitidis*, polysaccharide vaccines, field trials in children, S43, S51
kinetics of bacteremia and capsular antigenemia in infected rats, 292
longitudinal study of pharyngeal colonization in families with a child with meningitis or epiglottitis, 222
meningitis in infant rat model, S186
polyribophosphate, antibody in infants and children, effect of immunization with polyribophosphate, S57
Haemophilus vaginalis (see *Corynebacterium vaginale*)
Hemagglutination test, compared with enzyme-linked immunosorbent assay
indirect, for detection of antibody to cytomegalovirus, S337
reversed, for detection of hepatitis B surface antigen, S311
Hemagglutination inhibition test, for viral diseases, comparison with enzyme-linked immunosorbent assay, S274, S294, S300
Hemodialysis, and renal allografts, prospective study of herpesvirus infections in recipients, 531
Hemoperfusion, effect on clearance of gentamicin, cephalothin, and clindamycin from canine plasma, 801
Hepatitis, and perihepatitis, complications of experimental endocarditis due to *N. gonorrhoeae* in the rabbit, 37
Hepatitis B, acute and chronic
in chimpanzees, detection of e antigen, 541
relations among e antigen and its antibody and DNA polymerase and its inhibitors, 617
Hepatitis B e antigen
and antibody, and DNA polymerase and its inhibitors, relation in patients with acute and chronic hepatitis, 617
and antibody, relation to infectivity of hepatitis B virus in experimentally infected chimpanzees, 571
detection in chimpanzees during acute and chronic hepatitis B, 541
Hepatitis B surface antigen, detection by enzyme-linked immunosorbent assay
in human serum, comparison with reversed hemagglutination and radioimmunoassay, S311
with alkaline phosphatase-labeled antibody, comparison with radioimmunoassays, S318
Hepatitis B virus, infectivity in chimpanzees, relation to surface antigen and antibody, 571
Hepatitis B virus infection
discordant e antigen, DNA polymerase activity, and Dane particle responses in index case-contact case pair, 117
serodiagnosis by antibody to core antigen, 31
Hepatitis virus, mouse MHV-3, free amino acids in plasma during experimental infection of mice, 475
Herpes simplex virus, detection of antibodies by enzyme-linked immunosorbent assay, S286
Herpes simplex virus type 1, detection in clinical samples by enzyme-linked immunosorbent assay, comparison with tissue culture isolation, S304
Herpes simplex virus vaccines, prospects for development, 706
Herpesvirus hominis, causing herpetic whitlows, part of genital virus infection, 689
Herpesviruses, prospective study of infections in patients with renal allografts, 531
Herpetic whitlow, as part of genital virus infection, 689
Hybridization, of *E. coli* and *S. flexneri* 2a
for oral attenuated vaccine against shigellosis, 577
problems and characteristics of vaccines, 601
Hypersensitivity, immediate and delayed, in mice infected with *T. spiralis*, 562
IgA
circulating, blocking of serum bactericidal activity early in diseases due to *N. meningitidis*, 733
secretory, and serum immunoglobulins, role in acute respiratory tract infections in children in a kibbutz, 26
IgG antibodies, to type-specific lipopolysaccharides of *P. aeruginosa*, detection by solid-phase radioimmunoassay, 112
Immune complexes, circulating, detected by Clq deviation and Raji cell tests in patients with leprosy, 216
Immune response, human, to *E. coli* antigens, and pathogenesis of urinary tract infection, S144
Immunity
cross-protective, to gram-negative bacilli, induced by core glycolipid of *S. minnesota* and antigens of *S. pneumoniae*, S174
immunization-induced, to gram-negative bacteria, and cross-reactive antigens, S161
induced by bacterial vaccines, S1–S256
perinatal, to group B β-hemolytic *Streptococcus* type Ia, assessment by mouse protection and in vitro bactericidal tests, 649
Immunization
of guinea pigs with bacille Calmette-Guérin, effect on hematogenous dissemination of virulent *M. tuberculosis* to lungs, 439
of mice with bacille Calmette-Guérin, nonspecific protection against influenza virus infection, 171
with attenuated TC-83 Venezuelan equine encephalomyelitis virus vaccine, persistence of antibody, 354
with *S. dysenteriae* type 1, failure of high levels of antitoxin to prevent disease in rhesus monkeys, 416
Immunofluorescence
detection of parasitic infections, comparison with enzyme-linked immunosorbent assay, S267
indirect, assay for detection of antibody to varicella-zoster virus-induced membrane antigen, 519

Immunoglobulins, serum, and secretory IgA, role in acute respiratory tract infections in children in a kibbutz, 26
Immunology, of chronic primary infections with *T. spiralis* in mice, 562
Immunosuppression, quantitative effects on bronchoalveolar cells, 127
Infections
  nosocomial, due to gram-negative bacilli, epidemiology, and development and use of vaccines, S151
  with opportunistic viruses, and interstitial pneumonia in recipients of allogeneic bone marrow grafts, 754
Infectious diseases, evolution of clinical subspecialty, and characterization of the Infectious Diseases Society of America, 303
Influenza A, prospects for prophylaxis with amantadine•HCl, 301
Influenza A/New Jersey/8/76 (Hsw1N1) virus, sensitivity to amantadine•HCl, 297
Influenza A/Scotland/74 (H3N2) virus vaccine, efficacy against challenge with influenza A/Victoria/3/75 (H3N2) virus, 746
Influenza virus, temperature-sensitive mutants
  A/Georgia/74-*ts*-1[E] recombinant virus, production and evaluation in adults, 256
  evaluation in tracheal organ cultures at permissive and restrictive temperatures, 1
Influenza virus infection, nonspecific protection of mice by local or systemic immunization with bacille Calmette-Guérin, 171
Influenza virus vaccines
  bivalent A, split-product or whole-virus, comparison of reactogenicity, immunogenicity, and efficacy in children, 623
  pilot studies on recombinant cold-adapted live type A and B, 17
Interference, and pathogenesis of temperature-sensitive mutants of Sindbis virus in the embryonated egg, 7
Interferon, or interferon inducer, plus rabies vaccine, prophylaxis against rabies in mice and rhesus monkeys, 286
Interferon inducer, polyriboinosinic-polyribocytidylic acid, clinical studies in children, 50
Intestine, regional localization of activity of *C. perfringens* type A enterotoxin in rabbits, 661
Invasiveness, of 11 rabies virus isolates in mice, and surviving infected mice with sequelae, 336
Klebsiella pneumoniae, from the gastrointestinal tract or urine cultures, relative enterotoxigenicity, 205
Leishmania species, adenine metabolism and antileishmanial effect of allopurinol, 724
Leishmaniases, diagnosis and management, 160
Leprosy-like disease, spontaneous, in chimpanzee, 132
Leukocytes, from patients with cytomegalovirus mononucleosis, interaction with cytomegalovirus, 667
Lipopolysaccharides
  of gram-negative bacteria, immunopotentiating activity, S246
  type-specific, of *P. aeruginosa*, detection of IgG antibodies by solid-phase radioimmunoassay, 112
Listeria monocytogenes, kinetics of phagocytosis by human polymorphonuclear leukocytes and monocytes, 502
Lymphocyte-promoting factor, of *B. pertussis*, isolation and properties, S234
Lymphocytes, of diabetic subjects, impaired response to *S. aureus* antigen, 495
Lymphocytic choriomeningitis virus, defective-interfering, prevention of virus-induced cerebellar disease in rats, 391
M protein, of group A *Streptococcus*, an antiphagocytic molecule assembled on the cell wall, S222
Measles virus, nonproductive strain D.R., isolated from a patient with subacute sclerosing panencephalitis, cause of encephalitis in ferrets, 229
Meningitis
  acute bacterial, at Boston City Hospital during 12 years between 1935 and 1972, 400
  due to *H. influenzae* and *E. coli*, infant rat model, S186
  neonatal, due to *E. coli* K1, S93
  or septicemia in infants, due to group B *Streptococcus*, immunology, S98
Meningococcal disease, epidemic potential of strains of *N. meningitidis* based on serotype, 176
Monocytes, human, and polymorphonuclear leukocytes, comparison of kinetics of phagocytosis and bacterial killing, 502
Mononucleosis
  due to cytomegalovirus, interaction of leukocytes from patients and the virus, 667
  infectious, diagnostic value of IgG and IgM antibodies to capsid antigen of Epstein-Barr virus, 428
Mucous membrane, of rabbit trachea, resistance of *B. pertussis* phase I to mucociliary clearance, 609
Mucus, nasal, improved method for collection, 109
Mycobacteria, water-soluble fractions, immunopotentiating activity, S246
Mycobacterium tuberculosis, virulent, influence of vaccination with bacille Calmette-Guérin on hematogenous dissemination to lungs of guinea pigs, 439
Mycoplasma pneumoniae, efficacy of inactivated vaccine, S204
Na^+, K^+-adenosinetriphosphatase, inhibition by *E. coli* and *S. enteritidis* endotoxins as mechanism for endotoxin-induced cholestasis, 583
Neisseria gonorrhoeae
  antibiotic resistance of pretreatment isolates, trends and seasonality, 684
  experimental endocarditis in rabbits, hepatitis and perihepatitis as complications, 37
  penicillin-resistant, summary of a conference (erratum), 325
  surface components affecting interactions with eucaryotic cells, S138
  ultrastructural examination of the squamocolumnar junction of the cervix, 248
Neisseria meningitidis
  and *E. coli* strain Bos-12, sialic acid-containing polysaccharides, structure and immunology, S71
  capsular polysaccharide, ^{13}C-nuclear magnetic resonance spectroscopy, S78
  disease in military recruits, blocking of serum bactericidal activity by circulating IgA early in invasive dis-

ease, 733
in anal canal of homosexual men, 810
model for epidemic potential of strains based on serotype, 176
polysaccharide vaccines
group A, and *H. influenzae* type b polysaccharide vaccines, field trials in children, S43
group B, and *H. influenzae* type b polysaccharide vaccines, field trials in children, S51
groups A and B, immune response of human infants, S31
serogroup B, epidemic in Alabama, prophylaxis with a sulfonamide, 104
Neutrophils, inhibition of biologic effects of endotoxin by polymyxin B sulfate, 469
Oocysts, of *T. gondii*, from the feces of naturally infected cats, infectivity and characterization, 432
Otitis media
due to types 3 and 23 *S. pneumoniae*, comparison in chinchilla model, S191
comparison of levels of ampicillin and amoxicillin in serum and middle ear fluid of children (erratum), 325
Parasitic infections, detection by enzyme-linked immunosorbent assay, S267
Penicillin-resistant gonococci, summary of a conference (erratum), 325
Phagocytosis, by human polymorphonuclear leukocytes and monocytes, kinetics, 502
Pharmacokinetics, of ampicillin during pregnancy, 370
Pharmacology, maternal-fetal transfer of cefazolin in the first 20 weeks of pregnancy, 377
Plague
bubonic, outbreak in New Mexico, epidemiologic and clinical features, 489
diagnosis and management, 317
Pneumocystis, infections in humans, parasitologic and serologic observations, 43
Pneumonia, interstitial, and opportunistic viral infection in recipients of allogeneic bone marrow grafts, 754
Polymorphonuclear leukocytes
correlation of chemiluminescent and metabolic responses in subjects with atypical chronic granulomatous disease, 510
human, and monocytes, comparison of kinetics of phagocytosis and bacterial killing, 502
Polymyxin B sulfate, inhibition of biologic effects of endotoxin on neutrophils, 469
Polyriboinosinic-polyribocytidylic acid
an interferon inducer, clinical studies in children, 50
complexed with poly-L-lysine and carboxymethylcellulose
plus rabies vaccine, prophylaxis of rabies in mice and rhesus monkeys, 286
reduced mortality from yellow fever in rhesus monkeys, 122
Polyribophosphate, of *H. influenzae* type b, immunogenicity
in children, S57
in weanling rabbits, S63
Polysaccharide, capsular
of *B. fragilis* as a virulence factor, comparison of pathogenic potential of encapsulated and unencapsulated strains, 82
of *B. fragilis*, quantitative antibody response in animal model of intraabdominal abscess formation, 789
of *H. influenzae* type b, immune response, S43, S51, S57, S63
of *N. meningitidis*
immune response, S31, S43, S51
structure, S71, S78
of *S. pneumoniae*, immune response, S20, S38, S98, S174
Poxviruses, and relation to vaccinia virus, 453
Pregnancy
maternal-fetal transfer of cefazolin during first 20 weeks, 377
pharmacokinetics of ampicillin, 370
Primates
chimpanzee
relation of hepatitis B e antigen and antibody to infectivity of hepatitis B virus, 571
spontaneous leprosy-like disease, 132
with acute and chronic hepatitis B, detection of e antigen, 541
cynomolgous monkeys, detection of *T. canis* infection by enzyme-linked immunosorbent assay, S267
rhesus monkeys
failure of high levels of *S. dysenteriae* type 1 antitoxin to prevent disease after immunization, 416
infected with rabies virus, reduction in mortality rate by interferon inducer, 286
with spontaneous multifocal leukoencephalopathy, isolation of simian virus 40, 593
with yellow fever, reduction in mortality rate by interferon inducer, 122
Progressive multifocal leukoencephalopathy, in rhesus monkeys, isolation of simian virus 40, 593
Protein binding, of antibiotics, quantitative determination by preparative ultracentrifuge, 778
Proteus mirabilis, and *E. coli*, differential susceptibility to mouse urine and urea, 100
Pseudomonas aeruginosa
cell wall, action of tetracaine hydrochloride in vitro, 679
clinical isolates resistant to amikacin, 449
in burned skin of infected mice, production of exotoxin, 555
in rabbits with experimental endocarditis, synergy of carbenicillin and gentamicin in therapy, 327
polyvalent human immune γ-globulin, passive protection of mice against lethal disease, S181
type-specific lipopolysaccharides, detection of IgG antibodies by solid-phase radioimmunoassay, 112
Pyelonephritis, retrograde, protection of rats by vaccination with formalin-treated *E. coli* O6, 633
R factor, incidence, and antibiotic resistance in clinical isolates of *Salmonella* in India, 796
Rabies, prophylaxis in mice and rhesus monkeys, by injection of interferon or interferon inducer plus vaccine, 286
Rabies virus, characteristics of infections with 11 isolates

in mice, 336
Radioimmunoassay
and enzyme-linked immunosorbent assay, for detection of viral antibodies, magnetic transfer devices, S329
detection of hepatitis B surface antigen, comparison with enzyme-linked immunosorbent assay, S311, S318
solid-phase, detection of IgG antibodies to type-specific *P. aeruginosa* lipopolysaccharides, 112
Raji cell test, compared with Clq deviation test in detection of circulating immune complexes in patients with leprosy, 216
Recombinant virus, influenza A/Georgia/74-*ts*-1[E], production and evaluation in adults, 256
Renal allografts, and hemodialysis, prospective study of herpesvirus infections in recipients, 531
Reovirus-like agent, relative importance in etiology of pediatric diarrhea in Taiwan, 383
Respiratory tract infections, acute, in children in a kibbutz, role of secretory IgA and serum immunoglobulins, 26
Rheumatic fever, streptococcal infections without recurrences of acute rheumatic fever, 278
Rifampin, treatment of experimental brucellosis in mice and guinea pigs, 482
Rubella, detection of antibodies in human sera by enzyme-linked immunosorbent assay, comparison with hemagglutination inhibition, S300
Salmonella, antimicrobial resistance and R factor incidence in clinical isolates in India (1975–1976), 796
Salmonella typhi, evaluation of a UDP-glucose-4-epimerase-less mutant of *S. typhi* as a live oral vaccine, 717
Septicemia, or meningitis in infants, due to group B *Streptococcus*, immunology, S98
Serodiagnosis, of hepatitis B virus infection, by antibody to core antigen, 31
Serotypes, of *N. meningitidis*, relation to potential to cause epidemic disease, 176
Serratia marcescens, clinical isolate resistant to amikacin, 449
Serum dilution test
selection of a physiologic and practical diluent, 187
standardization, and correlation with antimicrobial assays and susceptibility tests, 196
Shigella
problems and characteristics of vaccines, 603
surveillance in the U.S., 1975, 458
Shigella dysenteriae type 1
immunization, failure of high levels of antitoxin to prevent disease in rhesus monkeys, 416
prospects for control of infection, 456
Shigella flexneri 2a, transfer of genes for surface antigens to *E. coli* for oral attenuated vaccine against shigellosis, 577
Shigellosis
diagnosis and management, 465
epidemiology in the U.S., 1975, 458
prospects for control, 456
Simian virus 40, isolation from rhesus monkeys with spontaneous progressive multifocal leukoencephalopathy, 593
Sindbis virus, temperature-sensitive mutants, pathogenesis in the embryonated egg, and interference, 7
Skin test, diagnostic, with varicella virus antigen, 784
Staphylococcus aureus
antigen, impaired response of lymphocytes of diabetic subjects, 495
emergence of variants after in vitro exposure to gentamicin, and infectivity of variants in animals, 360
kinetics of phagocytosis by human polymorphonuclear leukocytes and monocytes, 502
Streptococcal infections, failing to cause recurrences of rheumatic fever, 278
Streptococcus agalactiae, in rapid bioassay for clindamycin alone and with aminoglycosides, 422
Streptococcus
group A, M protein, an antiphagocytic molecule assembled on the cell wall, S222
group B
and septicemia or meningitis in infants, immunology, S98
perinatal infections, 137
type Ia, group B β-hemolytic, assessment of perinatal immunity by mouse protection and in vitro bactericidal tests, 649
Streptococcus pneumoniae
immunization with capsular polysaccharides, S38
type I, temperature-sensitive, characteristics and evidence for attenuation and immunogenicity, S208
type III, antibody to capsular polysaccharide, maturation of regulatory factors, S20
types 3 and 23, otitis media in the chinchilla model, S191
Subacute sclerosing panencephalitis, measles virus D.R. causing encephalitis in ferrets, 229
Subspecialty, infectious diseases, evolution, and characterization of the Infectious Diseases Society of America, 303
Sulfonamide, prophylaxis in epidemic of serogroup B *N. meningitidis* disease in Alabama, 104
Susceptibility testing, in vitro, of anaerobic bacteria to orally absorbed cephalosporins, 697
Syphilis, summary of a workshop on *T. pallidum* and vaccine development, 308
T-cell-dependent response, antibody formation in newborn mouse, S14
Temperature-sensitive mutants
influenza A/Georgia/74-*ts*-1[E] recombinant virus, production and evaluation in humans, 256
S. pneumoniae type I, characteristics and evidence for attenuation and immunogenicity, S208
Tetracaine hydrochloride, in vitro action on cell wall of *P. aeruginosa*, 679
Tetracycline analogues, in combination with amphotericin B, in vitro activity against *C. albicans*, 263
Toxocara canis, detection in sera of cynomolgous monkeys by enzyme-linked immunosorbent assay, comparison with immunofluorescence, S267
Toxoplasma gondii, from feces of naturally infected cats, 432
Tracheal organ culture
hamster, infected with *B. pertussis*, pathogenesis of infection, S196
hamster, infected with *B. pertussis*, scanning electron

microscopy, 768
mouse, murine cytomegalovirus infection of epithelial cells, 444
rabbit, resistance of *B. pertussis* phase I to mucociliary clearance, 609
Travelers' diarrhea, in foreign visitors to the U.S., 605
Treponema pallidum, summary of workshop on cultivation and vaccine development, 308
Treponema pertenue, causing yaws in the Americas, 1950–1975, 548
Trichinella spiralis
chronic primary infections in mice, kinetics of immunological responses, 562
detection in sera of swine by the enzyme-linked immunosorbent assay, S258, S267
epidemiology of infection in the U.S., 1975, 712
Trichinosis, in the U.S., 1975, 712
Tuberculosis, influence of vaccination with bacille Calmette-Guérin on hematogenous dissemination of *M. tuberculosis* to lungs of guinea pigs, 439
Typhus fever, 1847 epidemic in New York City, 813
Urea, bactericidal effect on *P. mirabilis* but not on *E. coli*, 100
Urinary tract infection
isolates of *E. coli* from urine compared with those from feces of healthy children, 346
pathogenesis, related to *E. coli* antigens and immune response, S144
Vaccines
see also specific organism or infection
attenuated (TC-83) Venezuelan equine encephalomyelitis virus, persistence of antibody after immunization, 354
bacterial, current status and future prospects, S1–S256
formalin-treated *E. coli* O6, protection against retrograde pyelonephritis in rats, 633
herpes simplex virus, prospects, 706
inactivated *M. pneumoniae*, efficacy, S204
influenza virus
see also supplement to December 1977 issue
A/Scotland/74 (H3N2), efficacy against challenge with A/Victoria/3/75 (H3N2) virus, 746
comparison of bivalent split-product and whole-virus in children, 623
temperature-sensitive mutants, recombinant cold-adapted live type A and B, 17
S. typhi, evaluation of UDP-glucose-4-epimeraseless mutant as a live oral vaccine, 717
shigella
oral attenuated *E. coli* expressing surface antigens of *S. flexneri* 2a, 577
problems and characteristics, 601
T. pallidum, against syphilis, development and research, 308
Vaccinia virus, origin, 453
Vagina, secretions, quantitation of bacteria in normal women and at various times during the menstrual cycle, 271
Variant forms, of *S. aureus* after in vitro exposure to gentamicin, and infectivity in animals, 360
Varicella virus antigen, diagnostic skin test reactions, clinical applications, 784
Varicella-zoster virus-induced membrane antigen, detection of antibody by immunofluorescence assay using monodisperse, glutaraldehyde-fixed infected target cells, 519
Venezuelan equine encephalomyelitis virus, persistence of antibody in humans after attenuated (TC-83) vaccine, 354
Vesicular stomatitis virus, infection of central nervous system of mice by mixtures of defective-interfering particles and wild-type virus, 59
Vibrio cholerae
diagnosis and management of infection, 461
immune response of intestinal mucosa of dogs to toxoid, S113
pathogenesis of disease and mechanisms of immunity, S105
Vibrio cholerae toxin, and *E. coli* toxin, inhibition of activity in intestinal loops, 693
Vibrio parahaemolyticus, Kanagawa-positive, in vitro adherence to epithelial cells, 588
Viral antibodies and infections, detection by enzyme-linked immunosorbent assay, S274–S340
Virus, defective-interfering lymphocytic choriomeningitis, prevention of cerebellar disease, 391
Yaws, in the Americas, 1950–1975, 548
Yellow fever, in rhesus monkeys, reduced mortality rate after treatment with complex of polyriboinosinic-polyribocytidylic acid, poly-L-lysine, and carboxymethylcellulose, 122
Yersinia pestis
diagnosis and management of infection, 317
epidemiologic and clinical features of outbreak of infection in New Mexico, 489

This index does not include the supplement to the December 1977 issue of the *Journal*. This supplement, entitled "Clinical Studies of Influenza Vaccines—1976," includes papers presented at a conference held at the National Institutes of Health, January 20–21, 1977, and will contain its own index.

The Journal of Infectious Diseases

Official Publication of the Infectious Diseases Society of America

Edward H. Kass, *Editor*
K. Frank Austen, *Associate Editor*
John F. Enders, *Associate Editor*
Bernard N. Fields, *Associate Editor*
William R. McCabe, *Associate Editor*
Morton N. Swartz, *Associate Editor*
Louis Weinstein, *Associate Editor*
Mary M. Eichhorn Adams, *Assistant Editor*
Carole L. Ju, *Managing Editor*
Phyllis Cohen-Garland, *Editorial Assistant*
Abbe-Ann Levine, *Editorial Assistant*
Ruth Linn Weinstein, *Editorial Assistant*

EDITORIAL BOARD

Robert M. Chanock, Bethesda, Md.
Leighton E. Cluff, Gainesville, Fla.
Calvin M. Kunin, Madison, Wis.
Alexander D. Langmuir, Boston, Mass.
Franklin Neva, Bethesda, Md.
John C. Sherris, Seattle, Wash.
James Steele, Houston, Tex.
John P. Utz, Washington, D.C.
Sheldon M. Wolff, Bethesda, Md.
Martha Yow, Houston, Tex.

INTERNATIONAL BOARD OF EDITORS

Louis Chedid, Paris, France
Frank Fenner, Canberra, Australia
W. R. O. Goslings, Leiden, Netherlands
Per Hedlund, Gothenburg, Sweden
Janusz Jeljaszewicz, Warsaw, Poland
Kiyoshi Konno, Sendai, Japan
A. A. Miles, London, England
Ciro A. Peluffo, Montevideo, Uruguay

Volume 136

July–December 1977

All rights reserved
THE UNIVERSITY OF CHICAGO PRESS, CHICAGO
THE UNIVERSITY OF CHICAGO PRESS LTD., LONDON S.W. 1

© 1977 BY THE UNIVERSITY OF CHICAGO
PUBLISHED MONTHLY JULY–DECEMBER

Printed in U.S.A.

The Journal of Infectious Diseases

Volume 136 • *July 1977* • *Number 1*

Contents

Major Articles

Temperature-Sensitive Mutants of Influenza Virus. XIII. Evaluation of Influenza A/Hong Kong/68 and A/Udorn/72 *ts* and Wild-Type Viruses in Tracheal Organ Culture at Permissive and Restrictive Temperatures. STEVEN R. MOSTOW, SUSAN FLATAUER, MARILYN PALER, and BRIAN R. MURPHY 1

Pathogenesis of Temperature-Sensitive Mutants of Sindbis Virus in the Embryonated Egg. III. Autologous, Homologous, and Heterologous Interference. BONNIE SCHLUTER, RALPH VOSDINGH, and ARTHUR BROWN 7

Pilot Studies on Recombinant Cold-Adapted Live Type A and B Influenza Virus Vaccines. FRED M. DAVENPORT, ALBERT V. HENNESSY, HUNEIN F. MAASSAB, ELVA MINUSE, LARRY C. CLARK, GERALD D. ABRAMS, and JOHN R. MITCHELL 17

A Prospective Study of Acute Respiratory Tract Infections among Children in a Kibbutz: The Role of Secretory IgA and Serum Immunoglobulins. YAIR YODFAT and ILANA SILVIAN ... 26

Serodiagnosis of Hepatitis B Virus Infection by Antibody to Core Antigen. GILBERT R. IRWIN, RICHARD G. ALLEN, HERBERT G. SEGAL, ALFRED M. ALLEN, J. ROBERT PUTNAK, HUBERT G. CANNON, and FRANKLIN H. TOP, JR. 31

Perihepatitis and Hepatitis as Complications of Experimental Endocarditis Due to *Neisseria gonorrhoeae* in the Rabbit. ROBERT L. KASPAR and DAVID J. DRUTZ 37

Parasitologic and Serologic Observations of Infection with *Pneumocystis* in Humans. J. H. E. TH. MEUWISSEN, I. TAUBER, A. D. E. M. LEEUWENBERG, P. J. A. BECKERS, and M. SIEBEN 43

Clinical Studies of an Interferon Inducer, Polyriboinosinic-Polyribocytidylic Acid [Poly (I) • Poly (C)], in Children. MARY ANNE GUGGENHEIM and SAMUEL BARON 50

Infection of the Central Nervous System Produced by Mixtures of Defective-Interfering Particles and Wild-Type Vesicular Stomatitis Virus in Mice. STANLEY G. RABINOWITZ, MAURO C. DAL CANTO, and TERRY C. JOHNSON 59

Isolation and Identification of Encapsulated Strains of *Bacteroides fragilis*. DENNIS L. KASPER, MARIE E. HAYES, BARBARA G. REINAP, FLOYD O. CRAFT, ANDREW B. ONDERDONK, and B. FRANK POLK 75

The Capsular Polysaccharide of *Bacteroides fragilis* as a Virulence Factor: Comparison of the Pathogenic Potential of Encapsulated and Unencapsulated Strains. ANDREW B. ONDERDONK, DENNIS L. KASPER, RONALD L. CISNEROS, and JOHN G. BARTLETT 82

Adjuvant Protection against Bacterial Infection in Granulocytopenic Mice. WILLIAM C. BUHLES, JR. and MOSHE SHIFRINE 90

Notes

Fungicidal Components of Mammalian Granulocytes Active against *Cryptococcous neoformans*. ROBERT I. LEHRER and KATHRYN M. LADRA 96

Differential Susceptibility of *Escherichia coli* and *Proteus mirabilis* to Mouse Urine and to Urea. H. HADAS, O. MEDALIA, and M. ARONSON 100

An Epidemic of Disease Due to Serogroup B *Neisseria meningitidis* in Alabama: Report of an Investigation and Community-Wide Prophylaxis with a Sulfonamide. JAY A. JACOBSON, THOMAS J. CHESTER, and DAVID W. FRASER 104

Improved Method for Collection of Nasal Mucus. KEITH R. POWELL, ROBERT SHORR, JAMES D. CHERRY, and J. OWEN HENDLEY 109

Detection of IgG Antibodies to Type-Specific *Pseudomonas aeruginosa* Lipopolysaccharides by Solid-Phase Radioimmunoassay. RICHARD KOHLER and ARTHUR WHITE 112

Discordant e Antigen, DNA Polymerase Activity, and Dane Particle Responses in Two Patients Representing an Index Case-Contact Case Pair with Hepatitis B Virus Infection. ROBERT P. PERRILLO, LAWRENCE D. GELB, WILBERT H. MILLIGAN III, WANDA WELLINGHOFF, and RICHARD D. AACH 117

Effect of a Nuclease-Resistant Derivative of Polyriboinosinic-Polyribocytidylic Acid Complex on Yellow Fever in Rhesus Monkeys (*Macaca mulatta*). E. L. STEPHEN, M. L. SAMMONS, W. L. PANNIER, S. BARON, R. O. SPERTZEL, and H. B. LEVY 122

Quantitative Effects of Immunosuppression on Bronchoalveolar Cells. JAMES E. PENNINGTON 127

Spontaneous Leprosy-Like Disease in a Chimpanzee. KELLEY J. DONHAM and JOEL R. LEININGER 132

From the National Institutes of Health

Summary of the Workshop on Perinatal Infections Due to Group B *Streptococcus*. CAROL J. BAKER 137

From the Center for Disease Control

Food-Borne Botulism in the United States, 1970–1975. MARCUS A. HORWITZ, JAMES M. HUGHES, MICHAEL H. MERSON, and EUGENE J. GANGAROSA 153

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XXIV. Leishmaniases. A. A. F. MAHMOUD and K. S. WARREN 160

Statement of Editorial Policy 164

Instructions to Authors and Use of Abbreviations 167

Volume 136 • *August 1977* • *Number 2*

Major Articles

Nonspecific Protection of Mice against Influenza Virus Infection by Local or Systemic Immunization with Bacille Calmette-Guérin. JAMES C. SPENCER, RAMA GANGULY, and ROBERT H. WALDMAN 171

Immunoepidemiology of Meningococcal Disease in Military Recruits. I. A Model for Serogroup Independency of Epidemic Potential as Determined by Serotyping. J. MCLEOD GRIFFISS, DENNIS D. BROUD, CARL A. SILVER, and MALCOLM S. ARTENSTEIN 176

Serum Dilution Test for Bactericidal Activity. I. Selection of a Physiologic Diluent. CHARLES W. STRATTON and L. BARTH RELLER 187

Serum Dilution Test for Bactericidal Activity. II. Standardization and Correlation with Antimicrobial Assays and Susceptibility Tests. L. Barth Reller and Charles W. Stratton 196

Relative Enterotoxigenicity of Coliform Bacteria. Frederick A. Klipstein, Richard F. Engert, and Helen B. Short 205

Discrepancy between Clq Deviation and Raji Cell Tests in Detection of Circulating Immune Complexes in Patients with Leprosy. K. S. K. Tung, B. Kim, B. Bjorvatn, G. Kronvall, L. C. McLaren, and R. C. Williams, Jr. 216

Pharyngeal Colonization with *Haemophilus influenzae* Type b: A Longitudinal Study of Families with a Child with Meningitis or Epiglottitis Due to *H. influenzae* Type b. Richard H. Michaels and Carl W. Norden 222

Encephalitis in Ferrets Caused by a Nonproductive Strain of Measles Virus (D.R.) Isolated from a Patient with Subacute Sclerosing Panencephalitis. Halldor Thormar, Keith Arnesen, and Pankaj D. Mehta 229

Gastroenteritis in Children: A Two-Year Review in Manitoba. I. Etiology. Marc J. Gurwith and Trevor W. Williams 239

Ultrastructural Study of Cervical Gonorrhea. Brian A. Evans 248

Temperature-Sensitive Mutants of Influenza A Virus. XIV. Production and Evaluation of Influenza A/Georgia/74-*ts*-1[E] Recombinant Viruses in Human Adults. Douglas D. Richman, Brian R. Murphy, Robert B. Belshe, Harold M. Rusten, Robert M. Chanock, Neil R. Blacklow, Thomas A. Parrino, Frederick B. Rose, Myron M. Levine, and Ellis Caplan 256

Antifungal Activity of Four Tetracycline Analogues against *Candida albicans* in Vitro: Potentiation by Amphotericin B. Michael A. Lew, Kevin M. Beckett, and Myron J. Levin 263

Quantitative Bacteriology of the Vaginal Flora. John G. Bartlett, Andrew B. Onderdonk, Ellen Drude, Carolyn Goldstein, Marlene Anderka, Susan Alpert, and William M. McCormack 271

Streptococcal Infections That Fail to Cause Recurrences of Rheumatic Fever. Alan L. Bisno, Iris A. Pearce, and Gene H. Stollerman 278

Successful Prophylaxis against Rabies in Mice and Rhesus Monkeys: The Interferon System and Vaccine. George M. Baer, John H. Shaddock, Sally A. Moore, Pamela A. Yager, Samuel S. Baron, and Hilton B. Levy 286

Notes

Circulating Capsular Antigen in Infant Rats Infected with *Haemophilus influenzae* Type b. Dan M. Granoff and George A. Nankervis 292

Sensitivity of Influenza A/New Jersey/8/76 (Hsw1N1) Virus to Amantadine•HCl. R. R. Grunert and C. E. Hoffmann 297

Editorial

Sensitivity of Influenza A Virus to Amantadine. George Gee Jackson 301

Infectious Diseases Society of America

The Evolution of the Clinical Subspecialist in Infectious Diseases. Edward W. Hook 303

From the National Institutes of Health

Summary of the Workshop on the Biology of *Treponema pallidum:* Cultivation and Vaccine Development. JOEL B. BASEMAN 308

From the Center for Disease Control

Brucellosis in the United States, 1965–1974. MARSHALL D. FOX and ARNOLD K. KAUFMANN .. 312

Serial Feature

Algorithms in the Diagnosis and Management of Exotic Diseases. XXV. Plague. T. BUTLER, A. A. F. MAHMOUD, and K. S. WARREN 317

Correspondence

Lack of Influence of Antibiotic Therapy on Concentrations of Glucose and Inorganic Elements in Saliva. SERGE KERNBAUM and MARIE-CLAUDE BLAYO 321

Reply. JOHN FLETCHER 322

Notices 324

Erratum (Klimek, J. J., Nightingale, C., Lehmann, W. B., and Quintiliani, R., 135:999–1002) .. 325

Erratum (Sparling, P. F., Holmes, K. K., Wiesner, P J., and Puziss, M., 135:865–867) 325

Volume 136 • *August 1977* • *Bacterial Vaccines Supplement*

Participants S1

Dedication S7

Symposium on the Current Status and Prospects for Improved and New Bacterial Vaccines: Welcome and Introduction. RICHARD M. KRAUSE S8

Session I. Immunity in the Newborn and Infant

Introduction. ELVIN A. KABAT S13

Formation of Antibody in the Newborn Mouse: Study of T-Cell-Independent Antibody Response. D. E. MOSIER, N. M. ZALDIVAR, E. GOLDINGS, J. MOND, I. SCHER, and W. E. PAUL S14

Maturation of Regulatory Factors Influencing Magnitude of Antibody Response to Capsular Polysaccharide of Type III *Streptococcus pneumoniae.* PHILLIP J. BAKER, HERBERT C. MORSE III, SUE S. CROSS, PHILIP W. STASHAK, and BENJAMIN PRESCOTT S20

Sickle Cell Anemia and Severe Infections Due to Encapsulated Bacteria. HOWARD A. PEARSON S25

Immune Response of Human Infants to Polysaccharide Vaccines of Groups A and C *Neisseria meningitidis.* RONALD GOLD, MARTHA L. LEPOW, IRVING GOLDSCHNEIDER, and EMIL C. GOTSCHLICH S31

Summary. ELVIN A. KABAT S36

Session II. Immunity to Encapsulated Bacteria

Prevention of Pneumococcal Infection by Immunization with Capsular Polysaccharides of *Streptococcus pneumoniae*: Current Status of Polyvalent Vaccines. ROBERT AUSTRIAN S38

Polysaccharide Vaccines of Group A *Neisseria meningitidis* and *Haemophilus influenzae* Type b: A Field Trial in Finland. P. HELENA MÄKELÄ, HEIKKI PELTOLA, HELENA KÄYHTY, HANNELE JOUSIMIES, OSSI PETTAY, ERKKI RUOSLAHTI, AULIKKI SIVONEN, and O.-V. RENKONEN S43

Interim Report of a Controlled Field Trial of Immunization with Capsular Polysaccharides of *Haemophilus influenzae* Type b and Group C *Neisseria meningitidis* in Mecklenburg County, North Carolina (March 1974–March 1976). J. C. PARKE, JR., RACHEL SCHNEERSON, JOHN B. ROBBINS, and JAMES J. SCHLESSELMAN S51

Antibody to Polyribophosphate of *Haemophilus influenzae* Type b in Infants and Children: Effect of Immunization with Polyribophosphate. PORTER ANDERSON, DAVID H. SMITH, DAVID L. INGRAM, JEANETTE WILKINS, PAUL F. WEHRLE, and VIRGIL M. HOWIE S57

Immunogenicity in Weanling Rabbits of a Polyribophosphate Complex from *Haemophilus influenzae* Type b. PORTER ANDERSON and DAVID H. SMITH S63

Sialic Acid-Containing Polysaccharides of *Neisseria meningitidis* and *Escherichia coli* Strain Bos-12: Structure and Immunology. TEH-YUNG LIU, EMIL C. GOTSCHLICH, WILLIAM EGAN, and JOHN B. ROBBINS S71

Structures of the Capsular Polysaccharides of *Neisseria meningitidis* as Determined by ^{13}C-Nuclear Magnetic Resonance Spectroscopy. HAROLD J. JENNINGS, APURBA K. BHATTACHARJEE, DAVID R. BUNDLE, C. PAUL KENNY, ADÈLE MARTIN, and IAN C. P. SMITH S78

Role of Protein Serotype Antigens in Protection against Disease Due to *Neisseria meningitidis*. CARL E. FRASCH S84

Summary. JOHN B. ROBBINS S91

Session III. Neonatal Bacterial Meningitis and Enteric Diseases of Infants and Children

Neonatal Meningitis Due to *Escherichia coli* K1. MARY P. GLODE, ANN SUTTON, JOHN B. ROBBINS, GEORGE H. MCCRACKEN, EMIL C. GOTSCHLICH, BERTIL KAIJSER, and LARS Å. HANSON S93

Immunological Investigation of Infants with Septicemia or Meningitis Due to Group B *Streptococcus*. CAROL J. BAKER and DENNIS L. KASPER S98

Mechanisms of Disease and Immunity in Cholera: A Review. JAN HOLMGREN and ANN-MARI SVENNERHOLM S105

Immune Response of the Intestinal Mucosa to Cholera Toxoid. NATHANIEL F. PIERCE and R. BRADLEY SACK S113

Virulence Factors of Enterotoxigenic *Escherichia coli*. DOLORES G. EVANS, DOYLE J. EVANS, JR., and HERBERT L. DUPONT S118

Intestinal Colonization and Adhesion by Enterotoxigenic *Escherichia coli*: Ultrastructural Observations on Adherence to Ileal Epithelium of the Pig. H. W. MOON, B. NAGY, and R. E. ISAACSON S124

Summary. SAMUEL B. FORMAL S130

Session IV. Genitourinary Tract Disease in Humans: Etiologic Agents and Antigens

Protection against Infection with *Neisseria gonorrhoeae* by Immunization with Outer Membrane Protein Complex and Purified Pili. THOMAS M. BUCHANAN, WILLIAM A. PEARCE, GARY K. SCHOOLNIK, and ROBERT J. ARKO S132

Surface Components Affecting Interactions between *Neisseria gonorrhoeae* and Eucaryotic Cells. JOHN SWANSON S138

Antigens of *Escherichia coli*, Human Immune Response, and the Pathogenesis of Urinary Tract Infections. L. Å. HANSON, S. AHLSTEDT, A. FASTH, U. JODAL, B. KAIJSER, P. LARSSON, U. LINDBERG, S. OLLING, A. SOHL-ÅKERLUND, and C. SVANBORG-EDÉN S144

Summary. EMIL C. GOTSCHLICH S150

Session V. Hospital-Acquired Infections

Epidemiology of Nosocomial Infections Due to Gram-Negative Bacilli: Aspects Relevant to Development and Use of Vaccines. WALTER E. STAMM, STANLEY M. MARTIN, and JOHN V. BENNETT S151

Cross-Reactive Antigens: Their Potential for Immunization-Induced Immunity to Gram-Negative Bacteria. WILLIAM R. MCCABE, SCOTT C. BRUINS, DONALD E. CRAVEN, and MARGARET JOHNS S161

Antibody to Cell Wall Glycolipid of Gram-Negative Bacteria: Induction of Immunity to Bacteremia and Endotoxemia. ABRAHAM I. BRAUDE, ELIZABETH J. ZIEGLER, HERNDON DOUGLAS, and J. ALLEN MCCUTCHAN S167

Cross-Protective Immunity to Gram-Negative Bacilli: Studies with Core Glycolipid of *Salmonella minnesota* and Antigens of *Streptococcus pneumoniae*. LOWELL S. YOUNG and PAUL STEVENS S174

A Polyvalent Human γ-Globulin Immune to *Pseudomonas aeruginosa:* Passive Protection of Mice against Lethal Infection. MIKE W. FISHER S181

Session VI. Models of Infection

The Infant Rat as a Model of Bacterial Meningitis. E. RICHARD MOXON, MARY P. GLODE, ANN SUTTON, and JOHN B. ROBBINS S186

Comparison of Otitis Media Due to Types 3 and 23 *Streptococcus pneumoniae* in the Chinchilla Model. G. SCOTT GIEBINK and PAUL G. QUIE S191

Pathogenesis of Infection with *Bordetella pertussis* in Hamster Tracheal Organ Culture. ALBERT M. COLLIER, LYNN P. PETERSON, and JOEL B. BASEMAN S196

Protective Efficacy of an Inactivated *Mycoplasma pneumoniae* Vaccine. RICHARD P. WENZEL, ROBERT B. CRAVEN, JOHN A. DAVIES, J. OWEN HENDLEY, BRUCE H. HAMORY, and JACK M. GWALTNEY, JR. S204

Temperature-Sensitive Mutants of Type I *Streptococcus pneumoniae:* Preparation, Characterization, and Evidence for Attenuation and Immunogenicity. CHARLES M. HELMS, MICHAEL B. GRIZZARD, and ROBERT M. CHANOCK S208

Adenyl Cyclase in *Bordetella pertussis* Vaccines. E. L. HEWLETT, C. R. MANCLARK, and J. WOLFF S216

Summary. MICHAEL F. BARILE S220

Session VII. Bacterial Products with Unusual Effects on Lymphoid and Other Cells

Streptococcal M Protein: An Antiphagocytic Molecule Assembled on the Cell Wall. V. A. FISCHETTI, E. C. GOTSCHLICH, G. SIVIGLIA, and J. B. ZABRISKIE S222

Lymphocytosis-Promoting Factor of *Bordetella pertussis:* Isolation, Characterization, and Biological Activity. STEPHEN I. MORSE S234

Action of Endotoxin on Lymphoid Cells. DAVID L. ROSENSTREICH, L. MICHAEL GLODE, and STEPHAN E. MERGENHAGEN S239

Chemically Defined Bacterial Products with Immunopotentiating Activity. L. Chedid and F. Audibert S246

Summary. Sotiros D. Chaparas S252

Current Status and Prospects for Improved and New Bacterial Vaccines: Summary of the Symposium. Maclyn McCarty S253

Volume 136 • *September 1977* • *Number 3*

Major Articles

Experimental Endocarditis Due to *Pseudomonas aeruginosa*. II. Therapy with Carbenicillin and Gentamicin. Gordon Archer and F. Robert Fekety, Jr. 327

Characteristics of 11 Rabies Virus Isolates in Mice: Titers and Relative Invasiveness of Virus, Incubation Period of Infection, and Survival of Mice with Sequelae. George M. Baer, William F. Cleary, Ana Maria Díaz, and Daniel F. Perl 336

Comparison of *Escherichia coli* from Bacteriuric Patients with Those from Feces of Healthy Schoolchildren. Gunilla Lidin-Janson, Lars Å. Hanson, Bertil Kaijser, Knut Lincoln, Ulf Lindberg, Sante Olling, and Hans Wedel 346

Persistence in Humans of Antibody to Subtypes of Venezuelan Equine Encephalomyelitis (VEE) Virus after Immunization with Attenuated (TC-83) VEE Virus Vaccine. Donald S. Burke, Helen H. Ramsburg, and Robert Edelman 354

Emergence of Variant Forms of *Staphylococcus aureus* after Exposure to Gentamicin and Infectivity of the Variants in Experimental Animals. Daniel M. Musher, Robert E. Baughn, Gayle B. Templeton, and John N. Minuth 360

Pharmacokinetics of Ampicillin during Pregnancy. Agneta Philipson 370

Maternal-Fetal Transfer of Cefazolin in the First Twenty Weeks of Pregnancy. Betty Bernard, Lorayne Barton, Michaeline Abate, and Charles A. Ballard 377

Relative Importance of Viruses and Bacteria in the Etiology of Pediatric Diarrhea in Taiwan. Peter Echeverria, Mary T. Ho, Neil R. Blacklow, Gerald Quinnan, Benjamin Portnoy, James G. Olson, Richard Conklin, Herbert L. DuPont, and John H. Cross 383

Prevention of Virus-Induced Cerebellar Disease by Defective-Interfering Lymphocytic Choriomeningitis Virus. Raymond M. Welsh, Peter W. Lampert, and Michael B. A. Oldstone 391

Acute Bacterial Meningitis at Boston City Hospital during 12 Selected Years, 1935–1972. Maxwell Finland and Mildred W. Barnes 400

Immunization with *Shigella dysenteriae* Type 1: Evaluation of Antitoxic Immunity in Prevention of Experimental Disease in Rhesus Monkeys (*Macaca mulatta*). James McIver, George F. Grady, and Samuel B. Formal 416

Rapid Bioassay for Clindamycin Alone and in the Presence of Aminoglycoside Antibiotics. James H. Jorgensen and Jean C. Lee 422

Notes

Diagnostic Value of IgG and IgM Antibodies to Capsid Antigen of Epstein-Barr Virus in Infectious Mononucleosis. G. Papaevangelou, A. Roumeliotou, D. Alexiou, E. Politou, and C. Papadatos 428

Characterization of *Toxoplasma gondii* from the Feces of Naturally Infected Cats. J. P. Dubey, Emanuel Christie, and P. W. Pappas 432

Antibodies to *Candida albicans* in IgA-Deficient Humans. SUBBI MATHUR, JUKKA KOISTINEN, CATHY U. KYONG, E. O. HORGER III, GABRIEL VIRELLA, and H. HUGH FUDENBERG 436

Host-Parasite Relationships in Experimental Airborne Tuberculosis. VI. Influence of Vaccination with Bacille Calmette-Guérin on the Onset and/or Extent of Hematogenous Dissemination of Virulent *Mycobacterium tuberculosis* to the Lungs. GHERRY E. HARDING and DONALD W. SMITH 439

Murine Cytomegalovirus Infection of Epithelial Cells in Mouse Tracheal Ring Organ Culture. RAUNO A. MÄNTYJÄRVI, MARYJANE K. SELGRADE, ALBERT M. COLLIER, SHIH-CHIN HU, and JOSEPH S. PAGANO 444

Patterns and Mechanisms of Emergence of Resistance to Amikacin. RICHARD D. MEYER 449

Editorials

The Origins of Vaccinia Virus. DERRICK BAXBY 453

Shigellosis Control—A Rosy Future? GERALD T. KEUSCH 456

From the Center for Disease Control

Shigella Surveillance in the United States, 1975. MARK L. ROSENBERG, EUGENE J. GANGAROSA, ROBERT A. POLLARD, OLGA BROLNITSKY, and JOHN S. MARR 458

Serial Features

Algorithms in the Diagnosis and Management of Exotic Diseases. XXVI. Cholera. C. C. J. CARPENTER, JR., A. A. F. MAHMOUD, and K. S. WARREN 461

Algorithms in the Diagnosis and Management of Exotic Diseases. XXVII. Shigellosis. T. BUTLER, A. A. F. MAHMOUD, and K. S. WARREN 465

Volume 136 • *October 1977* • *Number 4*

Major Articles

Inhibition of the Biologic Effects of Endotoxin on Neutrophils by Polymyxin B Sulfate. ROBERT M. BANNATYNE, NORMA M. HARNETT, KAM-YIN LEE, and W. DOUGLAS BIGGAR 469

Free Amino Acids in Plasma during Experimental Infection of Mice with the MHV-3 Strain of Mouse Hepatitis Virus. L. CACCIATORE, F. DE MARCO, R. CERINI, and F. DE RITIS 475

Rifampin in the Treatment of Experimental Brucellosis in Mice and Guinea Pigs. ALAIN M. PHILIPPON, MICHEL G. PLOMMET, ANTOINE KAZMIERCZAK, JOSÉ L. MARLY, and PIERRE A. NEVOT 482

Epidemiologic and Clinical Features of an Outbreak of Bubonic Plague in New Mexico. C. FORDHAM VON REYN, NEIL S. WEBER, BRUCE TEMPEST, ALLAN M. BARNES, JACK D. POLAND, JOHN M. BOYCE, and VICTOR ZALMA 489

Impaired Response of Lymphocytes of Diabetic Subjects to Antigen of *Staphylococcus aureus*. JOAN I. CASEY, BARBARA J. HEETER, and KAREN A. KLYSHEVICH 495

Kinetics of Phagocytosis and Bacterial Killing by Human Polymorphonuclear Leukocytes and Monocytes. PHILLIP K. PETERSON, JAN VERHOEF, DAVID SCHMELING, and PAUL G. QUIE 502

Correlation of Metabolic and Chemiluminescent Responses of Granulocytes from Three Female Siblings with Chronic Granulomatous Disease. ROBERT C. ALLEN, RUNE L. STJERNHOLM, MARGARET A. REED, THOMAS B. HARPER III, SUSHMA GUPTA, RICHARD H. STEELE, and WILLIAM W. WARING 510

Antibody to Varicella-Zoster Virus-Induced Membrane Antigen: Immunofluorescence Assay Using Monodisperse Glutaraldehyde-Fixed Target Cells. JOHN A. ZAIA and MICHAEL N. OXMAN 519

Prospective Study of Prevalence, Incidence, and Source of Herpesvirus Infections in Patients with Renal Allografts. SIRUS NARAQI, GEORGE GEE JACKSON, OLGA JONASSON, and HERBERT M. YAMASHIROYA 531

Detection of e Antigen during Acute and Chronic Hepatitis B Virus Infections in Chimpanzees. EDWARD TABOR, ROBERT J. GERETY, and LEWELLYS F. BARKER 541

Yaws in the Americas, 1950–1975. DONALD R. HOPKINS 548

Experimental Studies on the Pathogenesis of Infections Due to *Pseudomonas aeruginosa*: Direct Evidence for Toxin Production during Pseudomonas Infection of Burned Skin Tissues. CATHARINE B. SAELINGER, KATHLEEN SNELL, and IAN ALAN HOLDER 555

Kinetics of Immunological Responses, Resistance to Reinfection, and Pathological Reactions to Infection with *Trichinella spiralis*. DAVID I. GROVE, JOSEPH HAMBURGER, and KENNETH S. WARREN 562

Hepatitis B e Antigen and Infectivity of Hepatitis B Virus. T. SHIKATA, T. KARASAWA, K. ABE, T. UZAWA, H. SUZUKI, T. ODA, M. IMAI, M. MAYUMI, and Y. MORITSUGU 571

Studies with a New Generation of Oral Attenuated Shigella Vaccine: *Escherichia coli* Bearing Surface Antigens of *Shigella flexneri*. MYRON M. LEVINE, WILLIAM E. WOODWARD, SAMUEL B. FORMAL, PETER GEMSKI, JR., HERBERT L. DUPONT, RICHARD B. HORNICK, and MERRILL J. SNYDER 577

Notes

Inhibition of Na^+, K^+-Adenosinetriphosphatase by Endotoxin: A Possible Mechanism for Endotoxin-Induced Cholestasis. RICCARDO UTILI, CHARLES O. ABERNATHY, and HYMAN J. ZIMMERMAN 583

In Vitro Adherence of Kanagawa-Positive *Vibrio parahaemolyticus* to Epithelial Cells. MARY M. CARRUTHERS 588

Isolation of Simian Virus 40 from Rhesus Monkeys (*Macaca mulatta*) with Spontaneous Progressive Multifocal Leukoencephalopathy. C. A. HOLMBERG, D. H. GRIBBLE, K. K. TAKEMOTO, P. M. HOWLEY, C. ESPANA, and B. I. OSBURN 593

Transfer of Multiple Antibiotic Resistance from *Bacteroides fragilis* to *Escherichia coli*. CATHERINE MANCINI and R. J. BEHME 597

Editorial

Shigella Vaccines, Shigella Pathogens—Dr. Jekyll and Mr. Hyde. GRACE M. THORNE and SHERWOOD L. GORBACH 601

From the Center for Disease Control

A Study of Travelers' Diarrhea in Foreign Visitors to the United States. ROBERT W. RYDER, JOY G. WELLS, and EUGENE J. GANGAROSA 605

Introduction. JOHN L. SEVER S257

Participants S257

Scientific Articles

Application of the Indirect Enzyme-Labeled Antibody Microtest to the Detection and Surveillance of Animal Diseases. GEORGE C. SAUNDERS, ELVA H. CLINARD, MARY LOUISE BARTLETT, and WM. MORT SANDERS S258

The Enzyme-Linked Immunosorbent Assay and Its Application to Parasitic Infections. E. J. RUITENBERG and F. VAN KNAPEN S267

Enzyme Immunoassays for Viral Diseases. D. E. BIDWELL, ANN BARTLETT, and A. VOLLER S274

Evaluation of Some of the Parameters of the Enzyme-Linked Immunospecific Assay. SANDRA L. BULLOCK and KENNETH W. WALLS S279

Detection of Antibodies Specific for Herpes Simplex Virus in Human Sera by the Enzyme-Linked Immunosorbent Assay. STEVEN C. GILMAN and JOHN J. DOCHERTY S286

Quantitative, Semiautomated, Enzyme-Linked Immunosorbent Assay for Viral Antibodies. PAULI O. LEINIKKI and SUVI PASSILA S294

Detection of Antibody to Rubella Virus by Enzyme-Linked Immunosorbent Assay. MANETH GRAVELL, PRESTON H. DORSETT, OTTO GUTENSON, and ANITA C. LEY S300

Solid-Phase Enzyme Immunoassay for Herpes Simplex Virus. Q. R. MIRANDA, G. D. BAILEY, A. S. FRASER, and H. J. TENOSO S304

Enzyme-Linked Immunosorbent Assay for Hepatitis B Surface Antigen. GERRIT WOLTERS, LEO P. C. KUIJPERS, JOVAN KAČAKI, and ANTON H. W. M. SCHUURS S311

Detection of Hepatitis B Surface Antigen (HB_sAg) with Use of Alkaline Phosphatase-Labeled Antibody to HB_sAg. SEYMOUR P. HALBERT and MILTON ANKEN S318

Detection of Soluble Antigen of Epstein-Barr Virus by the Enzyme-Linked Immunosorbent Assay. WILLIAM C. WALLEN, JANET M. MATTSON, and PAUL H. LEVINE S324

Magnetic Transfer Devices for Use in Solid-Phase Radioimmunoassays and Enzyme-Linked Immunosorbent Assays. KENDALL O. SMITH and WARREN D. GEHLE S329

Comparison of the Enzyme-Linked Immunosorbent Assay and the Indirect Hemagglutination Test for Detection of Antibody to Cytomegalovirus. GABRIEL A. CASTELLANO, GEORGE T. HAZZARD, DAVID L. MADDEN, and JOHN L. SEVER S337

Major Articles

Resistance of *Bordetella pertussis* Phase I to Mucociliary Clearance by Rabbit Tracheal Mucous Membrane. TOHEY MATSUYAMA 609

e Antigen and Antibody, DNA Polymerase, and Inhibitors of DNA Polymerase in Acute and Chronic Hepatitis. R. CAPPEL, F. DE CUYPER, and D. VAN BEERS 617

A Controlled Double-Blind Comparison of Reactogenicity, Immunogenicity, and Protective Efficacy of Whole-Virus and Split-Product Influenza Vaccines in Children. PETER A. GROSS, FRANCIS A. ENNIS, PUREZA F. GAERLAN, LAWRENCE J. DENSON, CAROLYN R. DENNING, and DONALD SCHIFFMAN 623

Immunization against Retrograde Pyelonephritis. III. Vaccination against Chronic Pyelonephritis Due to *Escherichia coli*. S. J. D. BROOKS, J. M. LYONS, and A. I. BRAUDE 633

A Rabbit Model of Diarrhea Due to Invasive *Escherichia coli*. J. R. CANTEY, P. D. O'HANLEY, and R. K. BLAKE 640

Perinatal Immunity to Group B β-Hemolytic *Streptococcus* Type Ia. P. B. STEWARDSON-KRIEGER, K. ALBRANDT, T. NEVIN, R. R. KRETSCHMER, and S. P. GOTOFF 649

Bacteriophage Typing of *Corynebacterium diphtheriae*. SHEILA TOSHACH, ANNE VALENTINE, and SHIRLEY SIGURDSON 655

Regional Localization of Activity of *Clostridium perfringens* Type A Enterotoxin in the Rabbit Ileum, Jejunum, and Duodenum. J. L. MCDONEL and C. L. DUNCAN 661

Interaction of Cytomegalovirus with Leukocytes from Patients with Mononucleosis Due to Cytomegalovirus. CHARLES R. RINALDO, JR., PAUL H. BLACK, and MARTIN S. HIRSCH 667

Notes

Mechanism of Action of Tetracaine Hydrochloride against *Pseudomonas aeruginosa*. YU-WING LEUNG and BHUPAT D. RAWAL 679

Trends and Seasonality of Antibiotic Resistance of *Neisseria gonorrhoeae*. HAROLD W. JAFFE, AKBAR A. ZAIDI, CLYDE THORNSBERRY, GLADYS H. REYNOLDS, and PAUL J. WIESNER 684

Herpetic Whitlow as Part of Genital Virus Infection. RICHARD GLOGAU, LAVELLE HANNA, and ERNEST JAWETZ 689

Bismuth Subsalicylate Inhibits Activity of Crude Toxins of *Escherichia coli* and *Vibrio cholerae*. C. D. ERICSSON, D. G. EVANS, H. L. DUPONT, D. J. EVANS, JR., and L. K. PICKERING 693

In Vitro Activity of Five Oral Cephalosporins against Anaerobic Pathogenic Bacteria. S. SHADOMY, C. G. MAYHALL, and ELAINE APOLLO 697

Clindamycin-Associated Colitis Due to a Toxin-Producing Species of *Clostridium* in Hamsters. JOHN G. BARTLETT, ANDREW B. ONDERDONK, RONALD L. CISNEROS, and DENNIS L. KASPER 701

Editorial

Herpes Simplex Virus Vaccines. THOMAS G. WISE, PETER R. PAVAN, and FRANCIS A. ENNIS .. 706

From the Center for Disease Control

Trichinosis in the United States, 1975: Increase in Cases Attributed to Numerous Common-Source Outbreaks. PETER M. SCHANTZ, DENNIS D. JURANEK, and MYRON G. SCHULTZ 712

Erratum (Chatterjee, B. D., De, P. K., and Sen, T., 135:654–658) 716

Volume 136 • *December 1977* • *Number 6*

Major Articles

Evaluation of a UDP-Glucose-4-Epimeraseless Mutant of *Salmonella typhi* as a Live Oral Vaccine. R. H. Gilman, R. B. Hornick, W. E. Woodward, H. L. DuPont, M. J. Snyder, M. M. Levine, and J. P. Libonati 717

Antileishmanial Effect of Allopurinol. II. Relationship of Adenine Metabolism in *Leishmania* Species to the Action of Allopurinol. J. Joseph Marr and Randolph L. Berens ... 724

Immunoepidemiology of Meningococcal Disease in Military Recruits. II. Blocking of Serum Bactericidal Activity by Circulating IgA Early in the Course of Invasive Disease. J. McLeod Griffiss and Mary Ann Bertram 733

Vaginal Colonization with *Corynebacterium vaginale* (*Haemophilus vaginalis*). William M. McCormack, Catherine H. Hayes, Bernard Rosner, John R. Evrard, Vicki Ann Crockett, Susan Alpert, and Stephen H. Zinner 740

Efficacy of Live Attenuated Influenza A/Scotland/74 (H3N2) Virus Vaccine against Challenge with Influenza A/Victoria/3/75 (H3N2) Virus. Robert F. Betts, R. Gordon Douglas, Jr., Frieda K. Roth, and John W. Little III 746

A Prospective Analysis of Interstitial Pneumonia and Opportunistic Viral Infection among Recipients of Allogeneic Bone Marrow Grafts. Paul E. Neiman, William Reeves, George Ray, Nancy Flournoy, Kenneth G. Lerner, George E. Sale, and E. Donnall Thomas ... 754

Scanning Electron Microscopic Study of Hamster Tracheal Organ Cultures Infected with *Bordetella pertussis*. Kenneth E. Muse, Albert M. Collier, and Joel B. Baseman 768

Standardization of a Preparative Ultracentrifuge Method for Quantitative Determination of Protein Binding of Seven Antibiotics. Lance R. Peterson, Wendell H. Hall, Horace H. Zinneman, and Dale N. Gerding 778

Diagnostic Skin Test Reactions with Varicella Virus Antigen and Clinical Application of the Test. Hitoshi Kamiya, Toshiaki Ihara, Akihiko Hattori, Toshiaki Iwasa, Minoru Sakurai, Tadasu Izawa, Akira Yamada, and Michiaki Takahashi 784

Quantitative Determination of the Antibody Response to the Capsular Polysaccharide of *Bacteroides fragilis* in an Animal Model of Intraabdominal Abscess Formation. Dennis L. Kasper, Andrew B. Onderdonk, and John G. Bartlett 789

Notes

Antimicrobial Resistance and Incidence of R Factor among *Salmonella* Isolated from Patients with Enteric Fever and Other Clinical Conditions in Madras, India (1975–1976). C. N. Paramasivan, S. Subramanian, and N. Shanmugasundaram 796

Effect of Hemoperfusion on Clearance of Gentamicin, Cephalothin, and Clindamycin from Plasma of Normal Dogs. Jerry L. Rosenbaum, Jeffrey Levine, Bryan Falk, Rasib Raja, and Mark S. Kramer 801

Cervical Excretion of Cytomegalovirus: Correlation with Secretory and Humoral Antibody. Joseph L. Waner, Donald R. Hopkins, Thomas H. Weller, and Elizabeth N. Allred 805

Neisseria meningitidis in the Anal Canal of Homosexual Men. Thomas A. Chapel, Conrad Gatewood, and Maureen B. Keane 810

Special Article

Typhus Fever: Report of an Epidemic in New York City in 1847. Arthur L. Gelston and Thomas C. Jones 813

Editorial

Antimicrobial Agent-Induced Diarrhea—A Bacterial Disease. W. Lance George, Vera L. Sutter, and Sydney M. Finegold 822

From the Center for Disease Control

Botulism in the United States, 1976. Robert E. Black and Stephen S. Arnon 829

Reviewers for Volume 136 833

Index to Volume 136 835